



Ontario

# ENVIRONMENTAL ASSESSMENT BOARD

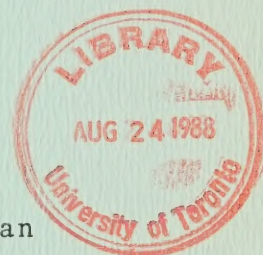
VOLUME: XXXIII

DATE: Monday, August 15th, 1988

BEFORE: M.I. JEFFERY, Q.C., Chairman

E. MARTEL, Member

A. KOVEN, Member



FOR HEARING UPDATES CALL (TOLL-FREE): 1-800-387-8810

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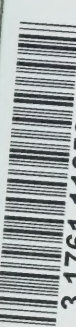
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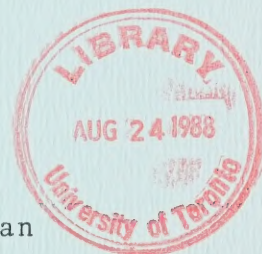
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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL  
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR  
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental  
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental  
Assessment for Timber Management on Crown  
Lands in Ontario;

- and -

IN THE MATTER of an Order-in-Council  
(O.C. 2449/87) authorizing the  
Environmental Assessment Board to  
administer a funding program, in  
connection with the environmental  
assessment hearing with respect to the  
Timber Management Class  
Environmental Assessment, and to  
distribute funds to qualified  
participants.

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Hearing held at the Ramada Prince Arthur  
Hotel, 17 North Cumberland St., Thunder  
Bay, Ontario, on Monday, August 15th, 1988,  
commencing at 1:00 p.m.

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VOLUME XXXIII

BEFORE:

MR. MICHAEL I. JEFFERY, Q.C.	Chairman
MR. ELIE MARTEL	Member
MRS. ANNE KOVEN	Member



A P P E A R A N C E S

MR. V. FREIDIN, Q.C.)	MINISTRY OF NATURAL
MS. C. BLASTORAH )	RESOURCES
MS. K. MURPHY )	
MR. B. CAMPBELL )	MINISTRY OF ENVIRONMENT
MS. J. SEABORN )	
MR. R. TUER, Q.C.)	ONTARIO FOREST INDUSTRY
MR. R. COSMAN )	ASSOCIATION and ONTARIO
MS. E. CRONK )	LUMBER MANUFACTURERS'
MR. P.R. CASSIDY )	ASSOCIATION
MR. J. WILLIAMS, Q.C.	ONTARIO FEDERATION OF
	ANGLERS & HUNTERS
MR. D. HUNTER	NISHNAWBE-ASKI NATION
	and WINDIGO TRIBAL COUNCIL
MR. J.F. CASTRILLI)	
MS. M. SWENARCHUK )	FORESTS FOR TOMORROW
MR. R. LINDGREN )	
MR. P. SANFORD )	KIMBERLY-CLARK OF CANADA
MS. L. NICHOLLS)	LIMITED and SPRUCE FALLS
MR. D. WOOD )	POWER & PAPER COMPANY
MR. D. MacDONALD	ONTARIO FEDERATION OF
	LABOUR
MR. R. COTTON	BOISE CASCADE OF CANADA
	LTD.
MR. Y. GERVAIS)	ONTARIO TRAPPERS
MR. R. BARNES )	ASSOCIATION
MR. R. EDWARDS )	NORTHERN ONTARIO TOURIST
MR. B. McKERCHER)	OUTFITTERS ASSOCIATION
MR. L. GREENSPOON)	NORTHWATCH
MS. B. LLOYD )	



APPEARANCES: (Cont'd)

MR. J.W. ERICKSON, Q.C.)	RED LAKE-EAR FALLS JOINT
MR. B. BABCOCK )	MUNICIPAL COMMITTEE
MR. D. SCOTT )	NORTHWESTERN ONTARIO
MR. J.S. TAYLOR)	ASSOCIATED CHAMBERS OF COMMERCE
MR. J.W. HARBELL)	GREAT LAKES FOREST
MR. S.M. MAKUCH )	PRODUCTS
MR. J. EBBS	ONTARIO PROFESSIONAL FORESTERS ASSOCIATION
MR. D. KING	VENTURE TOURISM ASSOCIATION OF ONTARIO
MR. D. COLBORNE	GRAND COUNCIL TREATY #3
MR. R. REILLY	ONTARIO METIS & ABORIGINAL ASSOCIATION
MR. H. GRAHAM	CANADIAN INSTITUTE OF FORESTRY (CENTRAL ONTARIO SECTION)
MR. G.J. KINLIN	DEPARTMENT OF JUSTICE
MR. S.J. STEPINAC	MINISTRY OF NORTHERN DEVELOPMENT & MINES
MR. M. COATES	ONTARIO FORESTRY ASSOCIATION
MR. P. ODORIZZI	BEARDMORE-LAKE NIPIGON WATCHDOG SOCIETY
MR. R.L. AXFORD	CANADIAN ASSOCIATION OF SINGLE INDUSTRY TOWNS
MR. M.O. EDWARDS	FORT FRANCES CHAMBER OF COMMERCE
MR. P.D. McCUTCHEON	GEORGE NIXON



(iii)

APPEARANCES: (Cont'd)

MR. C. BRUNETTA

NORTHWESTERN ONTARIO  
TOURISM ASSOCIATION



I N D E X   O F   P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
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Cross-Examination by Mr. Tuer	5398



I N D E X   O F   E X H I B I T S

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
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150	Interrogatory Question No. 2 and Answer posed by OFIA.	5420
151	Article entitled Ontario Reforestation Policy: Benefits	5449
152	Interrogatory Question No. 2 posed by CELA.	5461
153	Document entitled: Charter for Ontario.	5461
154	Ministry of Natural Resources Advertisement in the February, 1981 Edition of Canada Pulp and Paper Industry.	5476
155	Excerpt from a document entitled: Growth of Forests In Canada, Part II, A Quantitative Description of the Land Base and the Mean Annual Increment.	5480
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157	Document entitled: Proposed Policy for Controlling the Size of Clearcuts in Northern Forest Regions of Ontario.	5514
158	Document entitled: Papers Prepared for Panel Discussion at The Canadian Institute of Forestry/Ontario Professional Foresters Association Annual Meeting at Lakehead University, Thunder Bay, Ontario, dated August 23, 1976.	5530



1       ---Upon commencing at 1:00 p.m.

2                   THE CHAIRMAN: Good afternoon, everyone.  
3       Please be seated.

4                   Ladies and gentlemen, as you are probably  
5       aware, we have a Notice of Motion that has been filed  
6       with the Board by Mr. Castrilli. Perhaps we can just  
7       very briefly - with your permission, Mr. Tuer - deal  
8       with that in terms of setting a date for the arguing of  
9       this motion.

10                  MR. CASTRILLI: Mr. Chairman, I was going  
11       to suggest, in light of the contents of the Notice of  
12       Motion, that the return date of this motion be August  
13       31 in Thunder Bay. And I would propose --

14                  THE CHAIRMAN: What day is August 31, Mr.  
15       Castrilli?

16                  MR. CASTRILLI: I was just checking. I  
17       believe it is...

18                  MR. CAMPBELL: It is a Wednesday.

19                  MR. CASTRILLI: It is a Wednesday. With  
20       the Board's permission, I would suggest the first thing  
21       that day, that morning.

22                  THE CHAIRMAN: Do any of the other  
23       parties have any comments with respect to the proposed  
24       date?

25                  In view of the subject matter of the

1 motion which obviously, if granted, will materially  
2 affect the progress of this hearing, the Board would  
3 suggest that it would be in everybody's benefit to have  
4 as many of the parties who are interested in the  
5 subject matter of the motion to be here and able to  
6 speak to it.

7 What arrangements, as of this date, Mr.  
8 Castrilli, have you made with respect to the service of  
9 this motion on parties other than those present?

10 MR. CASTRILLI: I have only had an  
11 opportunity to speak to one or two, and those I have  
12 spoken to have indicated the 31st is acceptable to  
13 them. My proposal is simply to send the notice to all  
14 full-time parties.

15 You will note I have listed June 10th as  
16 the applicable parties list, and I understand it is now  
17 August the 5th, there is one additional name. But I  
18 will be amending that and I will make the notice  
19 available as quickly as I can to all the full-time  
20 parties which now number approximately 20.

21 THE CHAIRMAN: Very well. Then, the  
22 Board would instruct you to make sure that all parties  
23 on the party list as of August the 5th; that is, all  
24 full-time parties or parties receiving full-time  
25 correspondence, receive this Notice of Motion and the

1 Board will then fix August 31st for the return of the  
2 motion at the commencement of the proceedings that day  
3 which will, in all probability, be 9:30 a.m.

4 MR. CASTRILLI: Mr. Chairman, can I take  
5 it that service by mail will be acceptable for that  
6 purpose?

7 THE CHAIRMAN: Provided that you do it in  
8 a very timely fashion, I think that would be  
9 acceptable.

10 MR. CASTRILLI: Thank you.

11 MR. FREIDIN: Mr. Chairman, on the  
12 date -- I have just been advised that we might be in  
13 the middle of Panel No. 5 on August the 31st, and we  
14 have two outside consultants who are part of that panel  
15 and I would rather not hold them up, if at all  
16 possible.

17 I was just wondering if the end of the  
18 first week of September would be satisfactory?

19 MR. CASTRILLI: Mr. Chairman, my  
20 involvement in this hearing ends some time in September  
21 and it would not be appropriate for Ms. Swenarchuk to  
22 argue this motion as I have been involved in the  
23 hearing from the outset.

24 I would prefer to argue it before my  
25 departure. I probably will be involved for some time

1 in September, but at this point it is not clear how  
2 long.

3 THE CHAIRMAN: Do any other parties have  
4 trouble with the suggested date of September?

5 Mr. Tuer?

6 MR. TUER: What day is that?

7 MR. CASTRILLI: Sorry, it is Wednesday.

8 THE CHAIRMAN: What date are we talking  
9 about exactly?

10 MR. CASTRILLI: August 31, Wednesday.

11 MR. TUER: Yes, I understand that.

12 THE CHAIRMAN: That's that date, but what  
13 about the other date in September, Mr. Freidin?

14 MR. FREIDIN: I propose the 8th of  
15 September which is a Thursday.

16 MR. CASTRILLI: Mr. Chairman, that poses  
17 a problem for me. As I have indicated, I am not sure I  
18 will still be involved in the proceedings at that time.

19 MR. CAMPBELL: Could Mr. Freidin give an  
20 indication of how long he intends to be in-chief with  
21 Panel 5? Maybe we can work a little backwards.  
22 September 8th seems a little late to me.

23 MR. FREIDIN: Probably a day and a half,  
24 a day or a day and a half.

25 MR. CAMPBELL: Mr. Chairman, my

1 expectation is that Panel 5 will certainly be in-chief.  
2 You don't want it in the last week, Mr. Freidin, until  
3 after Panel 5 is complete?

4 MR. FREIDIN: That's what I was hoping  
5 for.

6 THE CHAIRMAN: What about the week  
7 before?

8 MR. FREIDIN: The 6th of September...

9 THE CHAIRMAN: Well, why don't we do  
10 this: Why don't we fix the 31st of August, but we will  
11 sit later that day, we will hear the motion and then  
12 continue on with your direct examination or  
13 cross-examination, whatever stage you are into.

14 It is a Wednesday. We are all here, we  
15 will just simply sit a little bit longer that day.

16 MR. TUER: The alternative is to do it on  
17 either a Monday, the first day of the week, or the  
18 Thursday, the last day of the week, and if there are  
19 experts involved, then they can come up a day later or  
20 go home a day earlier.

21 THE CHAIRMAN: What about that  
22 suggestion?

23 MR. CASTRILLI: Sorry, I couldn't hear  
24 him.

25 THE CHAIRMAN: The suggestion was to do

1       it on the Monday of that week or the Thursday of that  
2       week and the experts could just come up on the Tuesday,  
3       if we did it on the Monday.

4                   MR. CASTRILLI: I understand that at  
5       least one party would not be able to attend on the  
6       29th. That's a shorter day because that will be the  
7       day we recommence; is that correct? So we might as  
8       well just be doing that on the 1st?

9                   MR. CAMPBELL: Yes.

10                  THE CHAIRMAN: Is that acceptable to you,  
11       on the 1st?

12                  MR. CASTRILLI: It is acceptable to me.  
13       It appears to be acceptable to at least one other  
14       party, I don't about the third one.

15                  THE CHAIRMAN: Well, we are dealing with  
16       a situation where we have got a number of parties  
17       involved. I am not sure we are ever going to get to a  
18       situation where everybody is satisfied.

19                  MR. CASTRILLI: I recognize that, Mr.  
20       Chairman. September 1 is fine for me.

21                  THE CHAIRMAN: Why don't we fix September  
22       1st then at 8:30 a.m., the normal commencement time.

23                  And it would seem unlikely, Mr. Freidin,  
24       that we would get to any of the witnesses that day,  
25       based on the fact we have a short day and I think this

1 motion will take probably either some time to argue or  
2 some time for the Board to dispose of, if we are going  
3 to do it that day.

4 MR. CASTRILLI: Thank you, Mr. Chairman.

5 THE CHAIRMAN: Very well.

6 Any other preliminary matters to deal  
7 with at this time?

8 Mr. Tuer?

9 JOHN EDWARD OSBORN,  
10 KENNETH A. ARMSON,  
11 JOHN RANDOLPH CARY,  
DAVID GORDON, Resumed

12 CROSS-EXAMINATION BY MR. TUER:

13 Q. Members of the panel, I am going to  
14 be going through a few of the paragraphs in the witness  
15 statement. So if you will each put a copy of it in  
16 front of you I can direct you to the paragraphs I am  
17 interested in discussing.

18 The first one is paragraph 13, and I  
19 think you gave evidence with respect to that matter,  
20 Mr. Cary?

21 MR. CARY: A. Yes, that's correct.

22 Q. I just want to clarify the process  
23 that was adopted in 1972 insofar as industry is  
24 concerned, and by that I mean the forest products  
25 industry, the pulp and paper and lumber companies.

1                   Is it the case that there was no formal  
2                   consultation with the industries, as I have described  
3                   it, at that time in developing that policy, or the four  
4                   alternative policies or options?

5                   A.   You are correct, there was no formal  
6                   consultation.

7                   Q.   And there weren't -- there were no  
8                   requests for submissions or that sort of thing in the  
9                   development of these policies or alternative policies?

10                  A.   That is correct.

11                  Q.   And is that also the case in the 1977  
12                  and 1984 adjustments?

13                  A.   There was, as far as I am aware,  
14                  no -- that would be the case in 77. In '84, there may  
15                  have been some consultation with the industrial  
16                  foresters on the ground on the FMAs with regard to  
17                  Implementation Schedule fine tuning, but no  
18                  consultation with the industry at large at all.

19                  Q.   Thank you. I will come back to that  
20                  when we discuss the proposed new Forest Production  
21                  policy that you spoke of earlier in your evidence.

22                  Next is at paragraph 21. To what extent  
23                  has the dramatic increase in the silvicultural program  
24                  been attributable to the advent of the FMAs and  
25                  industries involved?

1                   A. The FMA program, as you know, started  
2                   in 1980 and since then, as the agreement holders have  
3                   shouldered the responsibility and the implementation of  
4                   the silvicultural work on the agreements, there has  
5                   been more work done, more silvicultural work carried  
6                   out on the agreements than was carried out when the  
7                   Crown was responsible for the silvicultural work.

8                   And we have seen, especially in the  
9                   later, parts of the 80s when the FMA holders shouldered  
10                  more and more of the responsibility as the phasing in  
11                  started to have some effect, there has been a  
12                  significant increase in the, for example, in tree  
13                  planting.

14                 Q. And to what extent has the fact of  
15                  increased access had to do with the dramatic increase  
16                  in silvicultural practices?

17                 A. I think that's contributed to it.  
18                  There is no question that we now, with permanent roads,  
19                  both primary and secondary roads to areas that we --  
20                  what were formally harvested in winter, for example, on  
21                  ice roads, we now have permanent year-round access to  
22                  those areas and this has meant an increasing proportion  
23                  of the harvest area has been accessed and, therefore,  
24                  treated.

25                 Q. Now, illustrative of what you have

1 just said, I want to refer you to Question No. 1 of the  
2 interrogatories of my client. (handed)

3 THE CHAIRMAN: We will mark this as  
4 Exhibit 149.

5 ---EXHIBIT NO. 149: Interrogatory Question No. 1 and  
6 answer posed by OFIA to MNR.

7 MR. TUER: I have more copies, but I am  
8 short of one. Perhaps they can share them.

9 MR. CARY: I have a copy, Mr. Tuer. Yes,  
10 we have one.

11 MRS. KOVEN: Mr. Tuer, I need an extra  
12 copy, please.

13 MR. TUER: Yes. (handed)

14 MRS. KOVEN: Thank you.

15 MR. TUER: Q. Mr. Cary, can we turn to  
16 the second page of the answer, which is a graph. I  
17 gather this graph was prepared under your direction;  
18 was it?

19 MR. CARY: A. That's correct.

20 Q. Now, in order to have a full  
21 appreciation of what this graph is doing or disclosing,  
22 what is the total area of the FMAs in the area of the  
23 undertaking?

24 A. We are looking at Crown land within  
25 the area of the undertaking?

1 Q. That is right, yes.

2 A. And the FMAs comprise, I believe, 45  
3 per cent -- about 45 per cent of the Crown land within  
4 the area of the undertaking.

5 Q. And what is the FMA regeneration  
6 treatment area in percentages of the whole Crown  
7 program?

8 A. Well, if you refer to your graph  
9 headed: Comparison of FMA Regeneration Programs Total  
10 For Crown Land, you will see the FMA total is at 60,000  
11 hectares and the total regeneration program for Crown  
12 land is approximately 115,000 hectares.

13 So we are looking at about 55 per cent of  
14 the Crown program that's conducted by the FMAs.

15 Q. So the FMAs, with an area of  
16 responsibility of about 45 per cent, are doing about 55  
17 per cent of the silvicultural regeneration program?

18 A. Of the regeneration program, yes.

19 Q. Yes. And then looking at the next  
20 graph which is headed: Comparison of FMA Tending  
21 Program to Total for Crown Lands, using the same  
22 percentage areas, what do we end up?

23 A. Well, you are looking at an FMA work  
24 of some 40,000 hectares out of a Crown program of  
25 80,000 hectares, which would be 50 per cent.

1 Q. Okay. Now, can I go from you, Mr.  
2 Cary, to you, Mr. Armson.

3 We have been discussing paragraph 23 and  
4 25. I would like to direct you, Mr. Armson, to  
5 paragraph 24. In the light of what has been occurring  
6 in the FMA program, particularly when one looks at the  
7 first graph of regeneration programs, and what I  
8 observe to be an rising line on the graph, might I  
9 suggest that the statement in paragraph 24 that:

10 "Technology development, particularly  
11 silvicultural treatments has not kept  
12 pace with developments in harvesting."

13 Is possibly a might conservative?

14 MR. ARMSON: A: It might be viewed that  
15 way, but I think that given that the development of  
16 harvesting - and here we are speaking of the  
17 technology, the mechanization which began in  
18 essentially in the 50s - has had virtually three  
19 decades of development; whereas the development of  
20 silvicultural equipment and, more particularly, by the  
21 industry involved becoming involved through the FMAs, I  
22 think the statement is to convey the sense that there  
23 has been a shorter time and, therefore, it has not kept  
24 pace in that sense.

25 I believe, if I might cite the document

1 in Panel 2 - I don't exactly recall the number - but  
2 the example there of a hydraulic type of site  
3 preparation equipment that one of the FMAs company  
4 developed, I think that is a very profound type of  
5 development that has come about through the FMAs.

6 So that in the sense of this statement it  
7 is that, if you like, the pace of change and  
8 development of technology for silvicultural equipment  
9 is quickening and it will, in fact it is catching up.

10 Q. So the silviculture side of the graph  
11 is playing catch-up but at an accelerated rate to that  
12 of the development of harvesting?

13 A. That is correct.

14 Q. And has that been a significant  
15 acceleration?

16 A. In my view a very significant one,  
17 not only in terms of very specific equipment, but I  
18 would add further, because this is a general statement,  
19 that more particularly the specification of how  
20 existing types of harvesting equipment might be used in  
21 relation to the silvicultural prescriptions is perhaps  
22 even more important.

23 It isn't just the new equipment in  
24 itself, but it is how existing equipment is  
25 specifically used and that I think is also equally

1 important.

2 Q. And how has that acceleration in  
3 silvicultural techniques and technology been related to  
4 the advent of the FMAs?

5 A. Very clearly. It came about because  
6 of the FMA holders undertaking the responsibility for  
7 not only carrying out the regeneration and other  
8 silvicultural treatments, but I think - as has been  
9 noted right from the beginning - integrating their  
10 harvesting, both the equipment and the systems, into  
11 one process involving both the harvesting and the  
12 regeneration.

13 And I think if I were to identify one  
14 single benefit that has been the greatest it has been  
15 bringing that integration into place.

16 Q. Paragraph 35, Mr. Gordon, I think you  
17 testified with respect to this aspect of the statement,  
18 and it is a small point, but it may be an important  
19 one. You say in the last sentence:

20 "The planting of additional trees to  
21 replace trees which did not survive is  
22 one alternative open to remedy..." or,  
23 "...to improve survival rates in the  
24 planting."

25 Operationally, is the planting of

1 additional trees a difficult and costly task?

2 MR. GORDON: A. Because you are  
3 intending to add fewer trees per hectare than you would  
4 originally put in place when you are planting an area  
5 for the first time, then relative to the cost per  
6 thousand and, therefore, the cost per hectare, there  
7 would be a higher cost.

8 Q. I am thinking of the mechanics of it  
9 as well and I may be entirely wrong in what I  
10 visualize, but I visualize areas where there is good  
11 regeneration being cheaper by far and where there is  
12 poorer regeneration you might want to replant, but are  
13 there difficulties in getting in equipment?

14 A. It will depend how --

15 Q. Depend on the ground again?

16 A. If you were moving towards making  
17 that decision that you are going to add additional  
18 trees to an area where the trees that were planted do  
19 not survive at a rate that you would hope for, and  
20 there are not additional trees coming in on that site  
21 naturally, when you are moving towards making that  
22 decision, the quicker you make that decision, the  
23 earlier you make that decision in relative terms, the  
24 cheaper it will be, being that any local access will  
25 deteriorate perhaps over time.

1                   So if you wait five years, as opposed to  
2                   two years, your cost for getting people in to plant  
3                   those trees will increase. As well, the longer you  
4                   wait, competition may develop on that site and,  
5                   therefore, when the planter is planting those  
6                   additional trees, the planter will have to go slower  
7                   because of the competition and, therefore, increase  
8                   costs.

9                   Q. I think you said that normally you do  
10                  the survival survey in about two years?

11                  A. That's the normal time. You could do  
12                  it at six months or one year.

13                  Q. And would that be an appropriate  
14                  time, using your expression earlier, rather than later,  
15                  to look to replacing trees that have not survived?

16                  A. That's correct. If you were  
17                  anticipating a potential problem, it would be in your  
18                  interest to detect that problem as early as possible.

19                  Q. Thank you.

20                  MR. MARTEL: Who would initiate that,  
21                  would that be the FMA holder or the Crown, to initiate  
22                  the plant you suggested?

23                  MR. GORDON: Excepting the phase-in  
24                  period where both the Crown and the FMA holder are  
25                  doing silvicultural work, where the FMA holder has

1 initiated the planting project, they would initiate the  
2 decision as to whether or not they would be going back  
3 to add additional trees.

4 On a company unit or a Crown unit where  
5 the Crown is directly responsible for the regeneration  
6 work, it would be the responsibility of the Crown to  
7 determine whether or not they should be going back and  
8 adding trees or doing whatever treatment is necessary,  
9 if the treatment is necessary.

10 But clearly where the FMA holder  
11 initially undertakes the original project, then it is  
12 their responsibility to make that decision as to  
13 whether or not they should be going back and doing  
14 something additional, whether it be planting trees or  
15 whatever.

16 MR. TUER: Q. Then, Mr. Gordon, would  
17 you look at page 177 which is Document 17, and 168  
18 Document, 13. I think there is an anomaly there that  
19 was not intended. Page 177 shows the FTG minimum  
20 stocking in these examples at 40 per cent.

21 MR. GORDON: A. That's correct. In the  
22 northwest region, that's correct.

23 Q. Now, if you go back to Document 168,  
24 it may not say this but it can be interpreted this way,  
25 it shows a minimum stocking standard of 80 per cent?

1                   A. I can see how you can interpret it  
2                   that way, that was not intended. What was intended  
3                   here was to show an example of a free to grow stand,  
4                   and on page 168, when you are looking at the minimum  
5                   stocking standard, you would have to meet the minimum  
6                   stocking standard which perhaps, if it was in the  
7                   northwest region, would be 40 per cent.

8                   And in the example, the example shows  
9                   that in this case the stand had stocking of 80 per cent  
10                  and, therefore, meets the minimum of 40 per cent.

11                  Q. What is the approximate range of  
12                  minimum stocking that is utilized as a  
13                  characterization; is it about 40 per cent?

14                  A. If you go through the regional  
15                  benchmark standards, the general minimum standard is 40  
16                  per cent.

17                  Q. Thank you. None is as high as 80 per  
18                  cent?

19                  A. I don't recall any being near 80.

20                  Q. Now, again, on paragraph 58 -- the  
21                  third paragraph of paragraph No. 58, which is on page  
22                  39.

23                  Mr. Armson, can you help us as to the  
24                  significance in those dramatic increases of percentage  
25                  of regeneration treatment of the harvested areas from

1 30 per cent to 55 per cent since the mid-1970s?

2 Can you help us as to the contribution of  
3 the FMAs to that significant increase?

4 MR. ARMSON: A. As noted in the answer  
5 to your interrogatory there, the proportion in the  
6 increase in relation to area, that was I believe the  
7 figure that Mr. Cary had noted of 55 per cent,  
8 proportion of regeneration from the FMAs whose area  
9 consisted of 45 per cent of the area of the  
10 undertaking.

11 I think that is the measure why it is not  
12 shown by statistics per se. There are, if I might  
13 quote my own observation, which I think bears out the  
14 fact that in the endeavor to regenerate and in the  
15 commitment, the FMA companies - certainly the ones that  
16 I am familiar with - have taken on that responsibility  
17 and that commitment and have, in fact, in many  
18 instances, and I can think of some very specific ones  
19 in the bringing together - and I referred to this  
20 integration of harvesting and regeneration - very  
21 deliberately modified or changed their method of  
22 harvesting such that areas - and I talked about  
23 untreatable areas earlier in the direct evidence -  
24 where, because of conditions of either terrain or slash  
25 or residuals, there were greater areas that could

1       become treated. And I think that is one of the  
2       examples of how that increase would come about.

3                   Q. And, Dr. Osborn, if I could direct  
4       your attention to page 250, this is Document 29, and  
5       page 251 which is Document 30.

6                   Looking at Document 29, comparing the  
7       present harvest level with the growing stock of all  
8       species, what is your comment as to the relationship  
9       one to the other? They are obviously dramatically  
10      different.

11                  DR. OSBORN: A. Yes, sir. The ratio  
12      between the harvest of 20-million and the growing stock  
13      is something in the order of 1 to 145.

14                  Q. Then if you would look at the graph  
15      on page 251 - I don't want to belabour this, but I had  
16      some difficulty understanding it - can you explain if  
17      there is any significance to the demand line and where  
18      it appears on this graph compared to the growing stock,  
19      old and new?

20                  A. The easiest explanation with regards  
21      to that particular figure, Document 30, would be to  
22      take the demand line right off that figure. In  
23      paragraph 62 on page 40 there are two concepts, and  
24      this is perhaps an editorial comment in the way the  
25      evidence got written.

1 Paragraph 62 has the first two sentences  
2 speaking to:

3 "The old forest growing stock will  
4 disappear. And, in turn, will be  
5 replaced by the new forest growing  
6 stock."

7 That is the first two sentences. And  
8 Document 30 speaks to that, if we ignore the demand  
9 line for a moment. In terms of growing stock, the old  
10 forest growing stock disappears, as shown on that  
11 diagram on page 251, and the new growing forest stock  
12 increases. That is the first two sentences of the  
13 paragraph.

14 The remainder of paragraph 62 speaks to  
15 the inter-relationships of supply from the old forest,  
16 new forest and demand. And the best illustrations of  
17 that are given in both the video and in the paper by  
18 Dr. Baskerville.

19 Now -- and that will be the simplest  
20 explanation to stop right there. So the easiest way  
21 would be to take the demand line right off the document  
22 on page 251.

23 Q. All right. If the demand line were  
24 plotted on that graph in relationship to the growing  
25 stock, old or new, where would you expect to find it?

1                   A. The demand line, as you have just  
2 pointed out, would be very, very, very small and would  
3 crawl very, very slightly just above the time axis  
4 line, because this is growing stock and the growing  
5 stock, as I have just mentioned in answer to the  
6 question, was approximately 100 times larger than the  
7 demand, the demand curve, on the same scale, should  
8 literally crawl along the horizontal axis, very close  
9 to the horizontal axis.

10                   There is really two lines on the graph on  
11 page 251 which are really at two different scales.

12                   Q. Thank you. Now, Mr. Gordon, with  
13 respect to the model factors, page 281, it's a factor  
14 related to demand assumption.

15                   MR. GORDON: A. I have it.

16                   Q. Now, I think we last week received a  
17 pretty good explanation respecting the way this model  
18 was intended to work and how it should be used, but can  
19 you help us as to the rationale of an assumed growth of  
20 1.5 per cent for 30 years? Was that a judgmental  
21 matter?

22                   A. That's a judgmental matter,  
23 interpretation on my part by looking at a number of  
24 publications, coming up with a recommendation and  
25 discussing them with the chief forest economist at that

1 time as to whether or not she could come up with  
2 something that was greatly different.

3 And that is where I looked at things like  
4 reports by the Food and Agricultural Organization of  
5 the United Nations, a report of theirs in 1986. I  
6 looked at a report that pertained to Canada's domestic  
7 consumption of forest products and what was projected  
8 up to the year 2,000. I made an interpretation of a  
9 graph within Woodbridge Reed, and I looked at a 1985  
10 report that reviewed the North American pulp and paper  
11 industry.

12 As to whether or not I can go to one  
13 specific document and find 1.5, that is very difficult  
14 to do.

15 Q. That is judgmental; was it?

16 A. That is correct.

17 Q. Did you have the opportunity to  
18 consult with the foresters and the clients whom I  
19 represent with respect to that?

20 A. No.

21 Q. Well, again, with respect to the  
22 assumption which is made of no increased demand on the  
23 forest after 30 years, is that also judgmental on your  
24 part?

25 I realize these assumptions have to be

1 made, you have explained that to us and I don't take  
2 issue with it, all I want to know is whether or not  
3 there was something else behind the assumption that was  
4 made?

5 A. It was somewhat arbitrary, but what  
6 it does recognize in an indirect sense is we are  
7 dealing with a finite land base and, as well, the  
8 30-year projection, as far as growth, tied in to some  
9 extent with 2020. It is somewhat arbitrary.

10 Q. Thank you. Now, could I ask you, Mr.  
11 Gordon, to look at Exhibit 146 which are the pages  
12 which were inserted following page 280 in the witness  
13 statement, and look first at 284A.

14 Again, I am not intending my questions to  
15 be critical because it has been explained what the  
16 purpose of these illustrations are. But I wonder, with  
17 respect to the illustration on page 284A, if you could  
18 look at the mill recovery of 50 per cent utilization in  
19 the mill and would you advise the Board whether or not  
20 that is an accurate estimate, if you will, of what  
21 really happens in the mill?

22 A. The purpose of the document on page  
23 284A was to show the effect of utilization improvements  
24 on either the amount of product you could produce or  
25 the line of gross -- the gross total volume that you

1 would have to harvest.

2 And so, therefore, if we look at the  
3 first line on page 284A, we have 1.43 gross total  
4 volume units, and based on cull survey tables we can  
5 convert that to 1.0 and those numbers are bona fide  
6 numbers.

7 As far as the 50 per cent mill recovery  
8 rate, that was just put in to simply show the  
9 mathematics of converting net merchantable volume to a  
10 number of product units. I could have used in the  
11 example 75 per cent or 90 per cent. The reason I used  
12 50 in this example was so that the math would be  
13 simple.

14 However, I still stand by the 1.43 factor  
15 for the softwood coertype and also the 1.59 factor for  
16 the intolerant hardwood coertype.

17 It was just to show in the second line  
18 and the third line that by improving the relative mill  
19 recovery rate that, therefore, you would need to  
20 harvest less volume or, by improving the bush  
21 utilization rate, you would need to utilize less  
22 volume.

23 The 50 per cent factor was not intended  
24 to say that 50 per cent of the volume that ends up at  
25 the mill and goes through the mill only ends up in

1 product.

2 Q. So one should not assume that 50 per  
3 cent of the product is left on the mill floor?

4 A. That is correct.

5 Q. What, in fact, in the real world are  
6 the recovery rates in the mill? I mean, how much is  
7 utilized?

8 A. It will vary from mill to mill. With  
9 some pulping processes it could be 95 per cent, with  
10 some saw mills, they may turn 50 per cent of the logs  
11 that go through the mill into actual lumber, but then  
12 they also produce chips which then go to pulp mills.  
13 So it becomes fairly complicated.

14 Q. And the sawdust and the shavings, do  
15 they go to a production of energy?

16 A. They may also do that.

17 Q. So you may get a recovery rate of 95  
18 per cent or better depending upon the marriage of, for  
19 example, lumber operations and pulp and paper  
20 operations?

21 A. That's correct. The intent of that  
22 document was not to target in on the "50 per cent mill  
23 recovery rate", it was to target in on the 10 per cent  
24 improvement on that relative rate.

25 Q. Thank you. So that, in effect, your

1 illustration was just -- perhaps again was, from my  
2 point of view, an unfortunate example?

3 A. I can understand that.

4 Q. And then on the zone-outs at page  
5 287. Here an assumption has been made that zone-outs  
6 for reserves is 5 per cent.

7 Now, again in reality and in practice, is  
8 there a depletion by virtue of reserves, for example,  
9 reserves around lakes, wildlife corridors, et cetera,  
10 et cetera, much exceeding 5 per cent?

11 A. Again, I chose this 5 per cent factor  
12 for reserves because I was doing a macro level analysis  
13 and there is no question that when you move from  
14 management unit to management unit, for example,  
15 depending on the amount of water that may be on that  
16 management unit, the factor may go down 2, 3 per cent  
17 or it may go up, 7 per cent, 8 per cent, 10 per cent.

18 The intent was to use a factor that we  
19 thought was reasonable across northern Ontario.

20 Q. It might go up to 30 per cent on a  
21 minimal basis; could it not?

22 A. You mean 30 per cent above the 5 per  
23 cent?

24 Q. 25 per cent above the 5 per cent.

25 A. Do you mean 1 per cent?

1 Q. Loss. Per hundred acres, are lost by  
2 reason of reserves, 30 per cent instead of 5 per cent?

3 A. I have not come across that condition  
4 myself, but I would tend to think that there will be  
5 circumstances where that will happen.

6 Q. Yes. And does that not have a  
7 dramatic effect on the amount of harvesting that can  
8 take place in any particular management unit?

9 A. Obviously so. If instead of 5 per  
10 cent of the area being reserved, 30 per cent of the  
11 area is reserved, that has a dramatic effect on the  
12 number of hectares that are available for harvesting.

13 Q. That would be one of the most  
14 dramatic or most significant factors; would it not be?

15 A. In the situation that you are  
16 describing, I would tend to think yes.

17 Q. And then at paragraph 97, the  
18 sentence follows upon some of the questions I really  
19 was asking you.

20 MR. TUER: This is a second  
21 interrogatory, Question No. 2, put by my client and, if  
22 I could, Mr. Chairman, mark the question and answer as  
23 the next exhibit.

24 THE CHAIRMAN: Exhibit 150.

25

1 ---EXHIBIT NO. 150: Interrogatory Question No. 2 and  
2 answer posed by OFIA.

3 MR. TUER: This time I came armed with  
4 copies. (handed)

5 THE CHAIRMAN: Thank you.

6 MR. TUER: Q. I will just read this into  
7 the record, Mr. Chairman, in relation to the second  
8 sentence in paragraph 97 on page 50, Panel 4.

9 "Can we infer from this statement that  
10 the Ontario Ministry of Natural Resources  
11 recognized that different mills using  
12 different processes have very significant  
13 requirements as to species size, quality  
14 and type of wood and that local species,  
15 product-specific shortages and/or  
16 surpluses may indeed occur but would not  
17 show up in this macro analysis."

18 Answer:

19 "Yes, we clearly recognize that  
20 analyses like those described in the  
21 evidence would need to be refined more  
22 specific than at the mill woodshed level.  
23 Moreover, we also recognize that the  
24 macro level analysis portrayed in the  
25 evidence may well average over local  
surpluses and shortfalls both in amount

1 and in timing. Without more specific  
2 detailed information, including a  
3 provision of data from the forest  
4 industry and a close scrutiny of certain  
5 assumptions, analysis at the mill  
6 woodshed level cannot be made. Finally,  
7 these macro analyses do not include any  
8 mention of specific economic,  
9 accessibility, operabilty, delivered wood  
10 costs, market prices, either today or the  
11 possible changes over time. Merely  
12 varying the dollar exchange rate may  
13 completely alter the wood supply reality  
14 for certain mills."

15 Mr. Armson, I assume you had a hand in  
16 the drafting of this reply, so I am putting my question  
17 to you. If I am wrong in doing so, let me know, but is  
18 your answer intended to be a general description of the  
19 model?

20 MR. ARMSON: A. Yes, it is. The  
21 model -- the scenarios generated from the model were in  
22 fact to provide the Board with the information  
23 concerning what a predicted model consists of and the  
24 elements that would go into it.

25 As I think I indicated in Panel 3

1 evidence, the Ministry also very clearly is concerned  
2 about the specific mill information, as I indicated, in  
3 relation to mill licence returns and in putting that  
4 together with the timber supply information from each  
5 of the management units and dealing with that in terms  
6 of woodflow both at the sub-provincial and regional  
7 levels.

8 And this is obviously where these  
9 elements that are described here would be of very  
10 specific significance.

11 Q. Why was it that this model was set up  
12 by an examination first of the northwest region, then  
13 the northeast region and then combining them? Was  
14 there any significance to that?

15 A. Mr. Gordon may wish to answer that  
16 one.

17 Q. I am sorry, yes. Thank you.

18 MR. GORDON: A. For example, when you  
19 are doing an analysis of northwestern Ontario versus  
20 northeastern Ontario, the planning regions, there are  
21 differences and we wanted to recognize that in our  
22 analysis, and one of the best examples of that would be  
23 fire depletion.

24 And so we ran the analysis separately  
25 using our factors and, for simplicity purposes and

1 recognizing what the results were on a planning region  
2 basis, in looking at them we didn't feel that the Board  
3 would gain a lot of information by us presenting  
4 instead of five scenarios, ten scenarios.

5 However, if when we had done that  
6 analysis we had detected something very significant,  
7 then we would have brought forward a description of the  
8 differences.

9 Q. In the natural -- practical operation  
10 of the model, would you in fact do it on a regional  
11 basis rather than on a wider basis as you have done in  
12 your scenarios here?

13 A. I think you could go either way. You  
14 can do it on the regional basis, as we did, or you  
15 could run all of Ontario Crown land at once for a given  
16 coertype, or you could sub-divide a region into  
17 management units or a number of management units going  
18 together that supply a cluster of mills.

19 And it would be up to the user of the  
20 model to make the decision as to how he or she would  
21 divide the land base for doing the simulations.

22 Q. I am just thinking of using the  
23 example that you gave of the apparent significant  
24 difference in fire loss in the northeastern region as  
25 opposed to the northwestern region.

1 A. Or vice versa.

2 Q. Or vice versa. Does that not -- does  
3 that sort of statistic not dramatically affect the  
4 result?

5 A. There is no question it does, but the  
6 general conclusions that we are able to draw by looking  
7 at northern Ontario, whether we looked at northern  
8 Ontario as a whole, by doing the aggregation, or  
9 looking at the two planning regions individually, I  
10 would suggest that we would come to the same  
11 conclusions.

12 THE CHAIRMAN: Mr. Gordon, is not the  
13 essence of this whole exercise to illustrate the  
14 model's capabilities without necessarily looking at the  
15 actual numbers?

16 In other words, although you have used  
17 some presumably real numbers and probably assumptions  
18 that are realistic at least at the macro level, is the  
19 Board supposed to place a lot of credence on the actual  
20 number or numerical values that come out of this  
21 predictive model, or are we supposed to be looking more  
22 towards the capability of a model of this type; in  
23 other words, what the inputs are, what the outputs are  
24 and what it can do?

25 What would you consider to be the actual

1 purpose of a model such as this?

2 MR. GORDON: In my opinion, it is both.  
3 No 1, very clearly, we want the Board to recognize that  
4 we have such a model and, therefore, can predict or  
5 simulate the future.

6 And, as well, we also wanted to put in  
7 front of the Board information pertaining in general  
8 terms at the macro level as to what Ontario's wood  
9 supply looked like. And in that, in very clear terms,  
10 when we are looking at the macro level, for example, we  
11 are not running out of wood 10 ten years from now or 20  
12 years, it is some point further into the future than  
13 that.

14 And so, therefore, we use the model not  
15 only to show you what the model was capable of, but  
16 also to put some results of some scenarios in front of  
17 you for your information, because a lot of people think  
18 we are running out of wood very quickly, and that is  
19 not the case.

20 THE CHAIRMAN: Okay.

21 MR. TUER: Thank you, Mr. Chairman.

22 Q. Now, Mr. Cary, at the end of your  
23 evidence you spoke of steps that are presently being  
24 taken under your supervision, as I understood it, with  
25 respect to the development of a new forest or timber

1 production policy.

2 You mentioned that you are developing  
3 seven background papers, and you said that the  
4 significant difference -- one of the significant  
5 differences in the process this time, as opposed to the  
6 1972 process or the process in the 1972 paper, is that  
7 there will be public consultation?

8 MR. CARY: A. That's correct.

9 Q. And by public, I assume you intend to  
10 include, do you not, exclusively the forest industry  
11 which I represent at this hearing?

12 A. That's correct.

13 Q. All right. So I will speak of the  
14 industry not the public at large in my questioning.

15 Is it the -- do you consider it  
16 beneficial to have the input of the industry in the  
17 development of these proposed new policies?

18 A. Yes.

19 Q. And is it the intention of the  
20 Ministry to consult and involve industry in the  
21 development of the new policies, should they be new  
22 policies?

23 A. We will consult with industry in the  
24 development of the new policies, and I see three areas  
25 where I think it would be particularly useful.

1                   The first would be in the demand area,  
2                   and the second would be with regard to species choice  
3                   and product choice. I think we would be remiss not to  
4                   consult with industry in those two areas and also in  
5                   the calibration or the development of the inputs into  
6                   the model which you have heard Mr. Gordon speak of.

7                   So I believe that in those three areas it  
8                   would be particularly important for us to consult  
9                   industry.

10                  Q. And when I speak of consulting or  
11                  involvement, I am referring to a meaningful involvement  
12                  by industry and I don't want to try to pin you down,  
13                  but do you understand what I mean by meaningful  
14                  involvement; that is to say, involvement as matters go  
15                  along and not -- it sometimes happens, and I am not  
16                  suggesting that it would happen in your Ministry, but  
17                  it sometimes happens that the paper is produced and  
18                  others who are affected by it have 10 days in order to  
19                  respond.

20                  That is not what I call meaningful  
21                  involvement. Do you anticipate a more active  
22                  involvement by industry than the illustration I just  
23                  gave you?

24                  A. I would hope so. We intend to  
25                  circulate the six papers - not seven, I think - the six

1 papers and allow adequate time for the involvement of  
2 your associations and other concerned and interested  
3 parties, and we are going to allow that time so that  
4 indeed the involvement, the consultation is meaningful.

5 Q. Thank you very much.

6 Just speaking finally to the one item you  
7 mention at paragraph 106, item (d). Have you got that,  
8 Mr. Cary?

9 A. It is 106(b)?

10 Q. (d) as in Donald?

11 A. (d), yes.

12 Q. There, am I correct in assuming, that  
13 your intention would be directed to all forest  
14 products, be they lumber or pulp or pulp and paper or  
15 kraft or particle board or whatever, veneer?

16 A. Well, I believe that pulpwood,  
17 vis-a-vis saw logs, vis-a-vis the higher quality  
18 products, veneer, yes, and species, of course very  
19 important in that determination.

20 Q. Thank you very much.

21 MR. TUER: Thank you, Mr. Chairman.

22 MR. MARTEL: Can I ask Mr. Cary a  
23 question. This parallel -- does the Ministry not worry  
24 about a perception of a parallel program being  
25 developed at the same time that the EA hearing is going

1 on, and then it probably might be curious as to why  
2 that is occurring in that fashion?

3 MR. CARY: The EA process obviously is  
4 coincident with the development of a new policy, but  
5 the EA process goes far beyond the development of a new  
6 policy.

7 The EA process looks at the effects of  
8 our undertaking on the environment which is -- although  
9 the formulation of the new Production Policy, if it is  
10 a new one, will be considering those macro effects, the  
11 socio-economic effects, we believe that we are going to  
12 examine the nuts and bolts of our activity out there.  
13 So I think that's a difference.

14 The Timber Production Policy is discussed  
15 in one panel's evidence, this particular panel, so  
16 admittedly we are setting -- we may be setting a new  
17 level, but we may go with the old level. But I think  
18 there are differences. Timing, yes, we are concerned  
19 about that, but I think they are separate exercises.

20 THE CHAIRMAN: How long, Mr. Cary, have  
21 you been involved - and I know historically we have  
22 probably had this information - but how long have you  
23 been involved with the EA process concerning this  
24 undertaking overall, roughly?

25 MR. CARY: I was a member of a task

1 force, I believe in 1975 - I think I have the date  
2 right - that was involved in preliminary drafting of a  
3 document by the Ministry of Natural Resources for  
4 submission to the Minister of the Environment.

5 A very different document and, in fact,  
6 that draft never was presented to the Minister of the  
7 Environment.

8 THE CHAIRMAN: Did you have any  
9 expectation at that time in 1975? I am not sure that  
10 the Act was proclaimed then, but if it was not  
11 proclaimed it had been through the legislature without  
12 the proclamation date, I think it was '76 for the  
13 proclamation.

14 But did you have any expectation in those  
15 early days that your undertaking might be exempted?

16 MR. CARY: No, I was not -- I was given  
17 no advice on that at all.

18 THE CHAIRMAN: So the Ministry proceeded  
19 with a full-fledged EA development under the  
20 assumption, even in those days, that you would  
21 ultimately end up in a hearing; is that correct?

22 MR. CARY: I was a very junior player,  
23 sir, at that juncture. I am not quite sure what was in  
24 the minds of the senior managers of the Ministry at  
25 that time.

1 I was responsible for drafting the nuts  
2 and bolts -- parts of those nuts and bolts, so I really  
3 have no knowledge of what the senior managers had in  
4 mind.

5 THE CHAIRMAN: My purpose -- I have not  
6 any sinister purpose in bringing all of this out, but  
7 my purpose in alluding to this is the fact that,  
8 obviously, if you have an Environmental Assessment  
9 process that is going to be ongoing for a number of  
10 years, in this case in excess of ten, other policies  
11 will be developed during that same period of time.

12 I mean, I think it is reasonable to  
13 assume that the world is not going to stop in terms of  
14 development of ancillary or other types of policies at  
15 the same time. Would that be a fair assumption of the  
16 way the Ministry would have viewed it?

17 MR. CARY: I believe so. And, remember,  
18 we did refine the Implementation Schedules, there were  
19 some proposals for examination of the Policy, we kept  
20 monitoring it and tracking it. So we were looking at  
21 it, but I agree with you, life goes on as well. We  
22 have to get on with developing policies.

23 THE CHAIRMAN: Thank you.

24 MRS. KOVEN: Is the Timber Production  
25 Policy the single most important policy of the Ministry

1 of the Environment?

2 MR. FREIDIN: I am sorry?

3 MR. CARY: Sorry?

4 MRS. KOVEN: The Ministry of Natural  
5 Resources.

6 MR. CARY: It is the single most  
7 important policy with regards to the timber production  
8 program, but I can't speak for the Minister, he may  
9 have -- he may think that there are other policies that  
10 are as important.

11 THE CHAIRMAN: Thank you, Mr. Tuer.

12 Mr. Castrilli, do you want to commence or  
13 should we have a break at this time prior to your  
14 commencement?

15 MR. CASTRILLI: Mr. Chairman, I would  
16 prefer the latter so I can move everything to the front  
17 desk.

18 MR. FREIDIN: Do you want a hand?

19 THE CHAIRMAN: Once again, upon request,  
20 the Board shall break for 20 minutes.

21 MR. FREIDIN: Ten?

22 THE CHAIRMAN: Twenty.

23 ---Recess taken at 2:10 p.m.

24 ---Upon resuming at 2:40 p.m.

25 THE CHAIRMAN: Thank you, ladies and

1 gentlemen. Please be seated.

2 Mr. Castrilli?

3 MR. CASTRILLI: Thank you, Mr. Chairman.

4 CROSS-EXAMINATION BY MR. CASTRILLI:

5 Q. Mr. Cary, I would like to begin with  
6 you. In your testimony respecting the 1972 Forest  
7 Production Policy you refer to certain assumptions that  
8 are necessary in order to forecast supply and demand,  
9 and among these are the species of trees which will be  
10 used.

11 I am referring in particular to paragraph  
12 4(c) of what is now Exhibit 135.

13 MR. CARY: A. Yes.

14 Q. Can you advise the Board where in the  
15 1972 Forest Production Policy Document, which is now  
16 Exhibit 136, the Ministry of Natural Resources  
17 indicates what the future species were expected to be?

18 A. I would have to check, but I don't  
19 believe that specific species are mentioned in the  
20 Forest Production Policy Options Document. There is  
21 mention of conifers, I believe, and softwood, but I  
22 don't think species are mentioned.

23 Q. Could you advise the Board how the  
24 Ministry in 1972 was able to forecast supply and demand  
25 for the purposes of advising the Cabinet respecting

1 what the forest production policies and options should  
2 be if there was no reference to species?

3 A. I believe that in this document there  
4 are demands shown that are based on products rather  
5 than species. Figure 3 on page 27 --

6 Q. You are referring to Exhibit 136?

7 A. Yes, I am.

8 Q. And that page was 37?

9 A. 27.

10 Q. 27.

11 A. Figure 3 refers to demand for  
12 pulpwood, and on page 28, Figure 4, that demand is -- a  
13 projection is for logs and bolts.

14 So the 1972 Forest Production Policy  
15 forecast demand for products and also the target was  
16 fiber. We intend to do it differently this time.

17 Q. This time you intend to refer to  
18 species?

19 A. Yes, we are going to look at species  
20 and products.

21 Q. Keeping with Exhibit 136, I would  
22 like to refer you to Table 5 which appears at page 146.

23 A. Yes, I have that.

24 Q. And perhaps, Mr. Cary, what we could  
25 do, so that it will be easy for the Board and yourself

1 to understand the columns I am referring to, is to  
2 simply treat the column on the left-hand side of the  
3 page that is headed Discount Rate as column 1, and just  
4 number all the columns right across the page.

5 So we end up on the right-hand side with  
6 the column which is called Benefit Minus Cost being  
7 column 12, for ease of reference.

8 THE CHAIRMAN: What table is this?

9 MR. CASTRILLI: It is called Table 5 of  
10 what is now Exhibit 136, and it is entitled: Analysis  
11 of Policy Options. It is the 1972 Forest Production  
12 Policy Document.

13 Mr. Chairman, I am suggesting that for  
14 ease of reference that the various columns be numbered  
15 1 through 12 from the left-hand side to the right-hand  
16 side of the page.

17 Q. Mr. Cary, could you confirm for me  
18 that the benefit/cost ratio on that table, which is the  
19 column 11, is determined by dividing present worth of  
20 net value added, which is column 10, by the amount of  
21 the investment, which is column 2?

22 MR. CARY: A. Mr. Chairman, may I make a  
23 comment before I answer that question?

24 I would just like to say that I am not  
25 qualified as an economist, so I may have some trouble

1 with this table because it is a financial analysis or  
2 an economic analysis of the policy options.

3 So I am certainly not an expert in  
4 discount rates and net present value and present worth  
5 of net value added and the like. So I will do my best  
6 to answer the questions but, as I understand it, this  
7 table was developed in concert with Treasury and  
8 Management Board at the time and met their standards  
9 for financial analysis.

10 THE CHAIRMAN: Well, Mr. Cary, just  
11 answer to the best of your ability and indicate clearly  
12 areas that you feel unqualified to answer.

13 MR. CARY: Thank you, Mr. Chairman.

14 THE CHAIRMAN: And then Mr. Castrilli  
15 will have the option of seeing if one of the other  
16 members of the panel can provide the answer or nobody  
17 can provide the answer.

18 MR. CASTRILLI: That's fine.

19 Q. Perhaps I might ask, before I  
20 continue, I presume none of the other members of the  
21 panel have -- I recall from the qualifications that Mr.  
22 Freidin outlined at the beginning that the other three  
23 members are not economists either; is that correct?

24 You need to say yes in order for the  
25 record to reflect your answer.

1 MR. ARMSON: A. Yes.

2 MR. GORDON: A. Yes.

3 DR. OSBORN: A. Yes.

4 THE CHAIRMAN: That means none of you are  
5 economists, for the record.

6 MR. CASTRILLI: Thank you.

7 Q. With that caveat in mind I will  
8 proceed and see how far we get.

9 MR. CARY: A. Could you repeat your  
10 question, please, Mr. Castrilli?

11 Q. Yes. Can you confirm for me that the  
12 benefit/cost ratio on Table 5, which is page 46 of  
13 Exhibit 136, is determined by dividing column 10, which  
14 is labeled present worth of net value added, by column  
15 2, amount of investment.

16 A. Do you have a calculator, I don't  
17 have one.

18 I am sorry, Mr. Castrilli, I don't have a  
19 calculator.

20 Q. That's fine. I will dig out my  
21 calculator at the same time. So if we were to do, for  
22 example, Mr. Cary, Option No. 2...

23 A. Yes.

24 MR. CASTRILLI: By the way, Mr. Chairman,  
25 perhaps for ease of reference, the five options are to

1 be found in column 2 under each of the headings and I  
2 suppose we can simply number them 1 through 5 -- 0  
3 being No. 1 and Option 5 being 44.5.

4 Q. So, Mr. Cary, if we, for example were  
5 to divide 49.2 by 8.8 we would get the benefit/cost  
6 ratio we see in column 11 of 5.6?

7 MR. CARY: A. That's correct.

8 Q. And so on for the other investment  
9 options on that page; is that correct? Will you accept  
10 that subject to verification?

11 A. I accept that, they look right.

12 Q. Thank you. And would it be fair to  
13 say that the table is designed to show that generally  
14 greater yields are expected as more money is put into  
15 silviculture or artificial regeneration, in general?

16 A. Could you repeat that?

17 Q. Yes. Would it be fair to say that  
18 the table is designed to show that greater yields are  
19 expected as more money is put into silviculture or  
20 artificial regeneration?

21 A. In a general sense, yes.

22 Q. And we can see that by looking at  
23 column 12, for example?

24 A. Yes.

25 Q. Thank you. Keeping in mind the

1       indication you gave the Board at the outset, I will ask  
2       this question but I will understand if you are unable  
3       to answer it.

4                   Is it accepted practice to calculate the  
5       benefit/cost ratio the way the Ministry of Natural  
6       Resources did it in Table 5?

7                   A. All I can say is, to repeat my  
8       earlier comment, that I am assured that this table was  
9       prepared in concert with the Treasury of the day, the  
10      staff of the Treasury of the day and Management Board  
11      of the day, so it met their standards.

12                  I cannot comment any further on whether  
13      this is the correct method or whether this is the  
14      method that the Ministry uses.

15                  Q. Mr. Cary, on your testimony -- or in  
16      your testimony on August 11th, you noted that the  
17      Ministry of Natural Resources was in the process of  
18      producing several background papers to the  
19      development -- or the developing review of the new  
20      Forest Production Policy. Do you recall that  
21      testimony?

22                  A. Yes.

23                  Q. One of the papers that you referred  
24      to was one on costs; do you recall that?

25                  A. No, I don't. I recall mentioning

1 costs as part of the paper on stretching the old forest  
2 and planting the new forest. We would be having to  
3 look at costs in the preparation of those papers. But  
4 I don't remember saying a paper would be specifically  
5 about costs.

6 Q. Could you advise the Board whether  
7 the Ministry of Natural Resources will be performing a  
8 benefit/cost analysis in the new Forest Production  
9 Policy?

10 A. I cannot advise the Board whether  
11 they will be doing one or not at this point in time.

12 Q. Now, you have testified that the  
13 economic analysis that was performed in the 1972  
14 Production Policy, which is now Exhibit 136, was  
15 performed by the -- is it TEGA, Treasury and Economics?

16 A. MTE.

17 Q. MTE?

18 A. Ministry of Treasury and Economics.  
19 I believe it was called that at the time.

20 Sorry, could you -- you believe it was  
21 performed by them? No, it was performed -- I believe  
22 the work was conducted by the people in the Ministry--

23 Q. Which Ministry?

24 A. --and it met their standards.

25 Q. Which Ministry?

1 A. Ministry of Natural Resources.

2 Q. The work, the economics work  
3 performed in the 1972 Forest Production Policy was  
4 performed by the Ministry of Natural Resources?

5 A. Table 5--

6 Q. Table 5

7 A. --was drawn together by the Ministry  
8 of Natural Resources' staff, I believe, to the best of  
9 my knowledge. But they were -- they kept contact with  
10 the Ministry of Treasury and Economics, for example.  
11 They may have consulted the Management Board  
12 Secretariat, but it was developed by our -- by  
13 Ministry of Natural Resources' staff.

14 Q. And you say the Treasury Department  
15 or Treasury Ministry confirmed the methods used?

16 A. That's correct, that's my belief.

17 Q. Is anyone from the Ministry of  
18 Natural Resources connected with the Economics Branch  
19 or with whichever branch performed it, going to testify  
20 at this hearing with respect to the economic and  
21 particularly the benefit/cost material in Exhibit 136?

22 A. I am not aware of anyone giving  
23 testimony specifically on that point.

24 Q. Could you advise as to whether you  
25 would be in a position to obtain information respecting

1        what the Ministry of Natural Resources' people who  
2        performed the analysis in Exhibit 136 relied on to  
3        calculate the benefit/cost ratio that appears on Table  
4        5?

5                    A.    Could you repeat the first part of  
6        that question?

7                    Q.    I was going to ask:    What did the  
8        Ministry of Natural Resources rely on to calculate the  
9        benefit/cost ratio in the manner it did but, as I  
10       understand, you are not in a position to answer that  
11       question.

12                   Can I ask you to determine if there is a  
13       person within the Ministry of Natural Resources who  
14       could in fact answer that question that can provide you  
15       with the name of any text or texts that were relied  
16       upon that you could provide the Board the name of?

17                   A.    I would like to make inquiries about  
18       that.

19                   THE CHAIRMAN:    Mr. Castrilli, this is  
20       some 18 years ago.

21                   MR. CASTRILLI:    I am thinking of standard  
22       economic texts.    If they can be referred to, I would  
23       appreciate it -- or found, I would appreciate it.

24                   MR. FREIDIN:    I would think if we went  
25       back 18 years and we happened to find somebody that was

1 involved in that exercise, to ask that person now 18  
2 years later to provide the text and exact documentation  
3 he relied on...

4 THE CHAIRMAN: Would it be that revalent  
5 today, in any event?

6 MR. CASTRILLI: Well, we are talking  
7 about the standard -- well, we are talking about how  
8 benefit/cost ratios are performed and that hasn't  
9 changed.

10 And if there was something by way of  
11 standard economic reference that was relied upon, it  
12 might well be reflected in the material that was used  
13 to develop the table. That should not be that  
14 difficult to obtain, assuming the Ministry can retrieve  
15 the files.

16 THE CHAIRMAN: Well, I think in view of  
17 the evidence that is in front of us, beyond making some  
18 kind of inquiry, Mr. Freidin, I do not think it would  
19 be necessarily relevant for the Ministry to be put  
20 through a great deal of trouble to try and dig up  
21 information that's 18 years old.

22 MR. FREIDIN: I am just wondering - of  
23 course, Mr. Castrilli is going to have to put his case  
24 in how he sees fit - but questions like that where get  
25 the feeling that he has some idea of what would have

1       been proper at the time and what would not have been  
2       proper.

3                       Perhaps he can consider putting the  
4       question to the witness, seeing if they can answer it,  
5       if they can't answer it, then he can call his experts  
6       at an appropriate time, as opposed to continual  
7       production to find out what they actually did do.

8                       THE CHAIRMAN: I think, Mr. Castrilli, we  
9       have to place some limits in this hearing on going back  
10      to documentation that is several years old.

11                      I mean, if you have a specific point to  
12      make I think Mr. Freidin is right, to the extent you  
13      should make the question clear; otherwise, if you want  
14      to relay on some particular point, you can do so  
15      through your own witness at the appropriate time and  
16      they, of course, will be called upon to respond.

17                      MR. CASTRILLI: Mr. Chairman, I am not  
18      intending to, with respect to this line of questioning,  
19      ask for all the material because I recognize the age of  
20      the document that is now Exhibit 136.

21                      THE CHAIRMAN: Very well.

22                      MR. CASTRILLI: Q. Mr. Cary, would it be  
23      fair to say that the first option under column 2, being  
24      the amount of the investment, where we see the figure  
25      0-million of dollars is the natural regeneration option

1 where there is no investment?

2 MR. CARY: A. That's correct.

3 Q. And could you confirm for me just by  
4 looking at the table that the natural regeneration  
5 option has no benefit/cost ratio because it has, under  
6 column 10, no present worth of net value added?

7 A. I believe so.

8 Q. Well, if you would just look at  
9 column 10 you will see there is a 0 there; is that  
10 right?

11 A. Yes, there is.

12 Q. And, Mr. Cary, could you just confirm  
13 for me, if under column 10, the first option which  
14 currently says 0, we had any number in place of the 0,  
15 what the benefit/cost ratio would be of the first  
16 option?

17 It would be infinity; would it not?

18 A. Yes, because you divide it by 0.

19 Q. Thank you. Could you confirm for me  
20 that a ratio of infinity to 1 would be a greater  
21 benefit/cost ratio than the numbers we see in column 11  
22 for the four other artificial regeneration investments?

23 A. If I understand what you -- if  
24 hypothetically infinity was placed where?

25 Q. Under --

1 A. Under column 11?

2 Q. Under column 10.

3 A. Yes.

4 Q. Excuse me, if under column 10 the  
5 first option had any number at all--

6 A. Yes.

7 Q. --then the benefit/cost ratio you  
8 just indicated, which would appear in column 11 for the  
9 0 investment option, would have a benefit/cost ratio of  
10 infinity. So is infinity larger than any of the other  
11 numbers we see in column 11?

12 A. Well, I don't know what they use in  
13 benefit/cost and what economists use, but -- so I can't  
14 judge whether infinity is better or worse.

15 Q. That is not what I asked you. I  
16 didn't ask you whether it was better or worse, I asked  
17 you whether it was larger than any of the other numbers  
18 you see?

19 A. Well, it is an infinite number.

20 Q. Thank you.

21 THE CHAIRMAN: Where is that going, Mr.  
22 Castrilli, like, what is the point of this?

23 MR. CASTRILLI: Mr. Chairman, since this  
24 witness is not an economist we can't get into the  
25 economics discussion I intended, vis-a-vis how one

1 calculates cost or not.

2 But I think it is clear he has already  
3 indicated that if the first -- if under column 11 the  
4 option has an infinitely large number it is obviously  
5 going to have a bigger benefit/cost ratio than the  
6 other four items which are artificial investment -- or  
7 artificial regeneration investment options, and that's  
8 all that is the purpose of that line of questioning.

9 If one were to calculate the benefit/cost  
10 ratio differently from the way the Ministry did, then  
11 perhaps we would have a different set of numbers and,  
12 more importantly, if it was infinity it would be the  
13 largest. That's the line of question with respect to  
14 this particular point.

15 Q. Now, Mr. Cary, I understand from  
16 looking at Exhibit 136 -- perhaps I should refer you to  
17 pages 42 and 43 of Exhibit 136.

18 The last paragraph beginning on the  
19 bottom of page 42 and going over to page 43 of Exhibit  
20 136, you essentially note that:

21 "The value added by manufacturer for the  
22 primary forest industries has been  
23 selected as representing a reasonable  
24 proxy of the economic contribution which  
25 wood would make to the Ontario economy."

1 And then dropping down one sentence:  
2 "Implicit in the selection of this  
3 measure is the assumption that the  
4 non-forest oriented component of value  
5 added at the primary level is  
6 approximately offset by the forest  
7 oriented portion of value added which  
8 occurs at the secondary and tertiary  
9 levels of management."

10 Can we take it then that the Ministry  
11 relied on value added in this document, since it seems  
12 to confirm it in that paragraph?

13 MR. CARY: A. Yes.

14 MR. CASTRILLI: Mr. Chairman, to speed  
15 this up I would like to introduce a document which the  
16 witness has been given notice of.

17 THE CHAIRMAN: Very well.

18 MR. CASTRILLI: Q. Mr. Cary, I am  
19 showing you a copy of an article entitled Ontario  
20 Reforestation Policy: Benefits and Costs by F.J.  
21 Anderson of the Department of Economics at Lakehead  
22 University.

23 Do you recognize that document as the one  
24 you have been given notice of?

25 MR. CARY: A. I do.

1 THE CHAIRMAN: Exhibit 151.

2 ---EXHIBIT NO. 151: Article entitled Ontario  
3 and Reforestation Policy: Benefits

4 Costs by F.J. Anderson  
MR. CASTRILLI: Q. Mr. Cary, just

5 looking at what now is Exhibit 151, the first page is a  
6 summary of it, the first paragraph.

7 MR. CARY: A. Mr. Chairman, I would like  
8 to reiterate, I had a look at this on the weekend and  
9 this is an academic economist's view and, again, I am  
10 not qualified in that regard and so I will have to -- I  
11 will ask you to be aware of that.

12 MR. CASTRILLI: Mr. Chairman, again, I am  
13 now aware of that and I will redesign my cross to take  
14 that into account, and I would like to have the answers  
15 that I believe Mr. Cary is in a position to answer.

16 THE CHAIRMAN: Very well. We will take  
17 that into account, Mr. Cary.

18 MR. CARY: Thank you.

19 MR. CASTRILLI: Q. The first paragraph  
20 on what would be the first page, page 336 of what is  
21 now Exhibit 151, Mr. Cary, is a general summary of the  
22 article. It indicates that:

23 "The Government of Ontario has recently  
24 committed itself to a major expansion of  
25 reforestation in the province with a view

1 to ensuring expanded timber supplies in  
2 the 21st Century. Notwithstanding  
3 justifications offered by the Ministry of  
4 Natural Resources, the present paper  
5 concludes that the new Ontario program  
6 does not meet the test of viability  
7 provided by tools of conventional  
8 benefit/cost analysis."

9 Do you agree with that assessment or are  
10 you in no position to answer that question?

11 MR. CARY: A. In my reading of the  
12 paper, Mr. Anderson -- or is it Dr. Anderson, I believe  
13 that is his conclusion.

14 Q. I am sorry, had you completed your  
15 answer?

16 A. Yes.

17 Q. I would like to refer you to page --

18 MR. CASTRILLI: Mr. Chairman, if I could  
19 have one moment's indulgence in light of Mr. Cary's  
20 non-expertise as an economist, I would appreciate it.

21 Q. Mr. Cary, I would like to refer you  
22 to page 343.

23 MR. CARY: A. Yes, I have it.

24 Q. The heading under: A Critique of the  
25 Ministry Benefit/Cost Approach, all Mr. Anderson is

1 doing in that first paragraph is summarizing his  
2 differences with the way the Ministry set out its  
3 cost/benefit model. I won't go through those with you  
4 at this time, recognizing -- well, I won't go through  
5 the overall review, but I would like to refer you to  
6 one matter I believe is within your expertise, as I  
7 understand it.

8 You will note on the bottom of page 343  
9 he notes:

10 "Second, the Ministry adopts a different  
11 measure of end of rotation benefits from  
12 the stumpage value definition used in the  
13 present paper."

14 Now, I would like to refer you to the  
15 issue of rotation period which is dealt with in general  
16 by Mr. Anderson beginning at the bottom of page 344 and  
17 the top of page 345.

18 The paragraph at the bottom of that page that begins:

19 "The final difference..."

20 Do you have that page?

21 MR. CARY: A. I am on 344

22 Q. The very bottom of the page, the  
23 paragraph that begins:

24 "The final difference..."

25 A. Yes, I am, I am there.

1 Q. Okay. I am just going to read that  
2 paragraph into the record and I would like your comment  
3 on it, I believe it is within your area of expertise:

4 "The final difference between the  
5 Ministry benefit/cost analysis and the  
6 present one concerns the assumed rotation  
7 period. The Ministry's land-use  
8 assumptions imply an average rotation of  
9 over 90 years, for example, Option 3 of  
10 the 1972 study involves annual harvesting  
11 and regeneration of 376,000 acres using a  
12 total of 35-million acres for an average  
13 rotation of 93 years. Notwithstanding  
14 the land use figures in the absence of  
15 any discussion that would lead the reader  
16 to expect a significant shortening of  
17 the usual rotation, the value added  
18 benefits of reforestation are assumed to  
19 be realizable in the year 2020 signifying  
20 a rotation of just less than 50 years!"

21 And, Mr. Cary, as you may recall when I  
22 referred you earlier to Table 5 of Exhibit 136, several  
23 of the columns referred to the year 2020 and that is  
24 what Dr. Anderson is referring to.

25 Now, he goes on to say:

1 "A rotation period of this length is  
2 inconsistent with the end of rotation  
3 yields assumed by the Ministry, as well  
4 as the yields of the present study."

5 And there he is referring to his study  
6 that is contained in this paper.

7 He then notes:

8 "Lengthening the rotation to 90 years, or  
9 even 75 years, would lead to a very  
10 serious reduction in the Ministry's  
11 estimates of the net present value end of  
12 rotation yields."

13 And then he goes on to note in the next  
14 paragraph that:

15 "The benefit/cost analysis undertaken by  
16 the Ministry in defense of the industrial  
17 benefits of large-scale reforestation in  
18 Ontario involves critical, conceptual  
19 shortcomings leading to an overestimate  
20 of the net present value of forest  
21 investments."

22 Now, just going back to the issue of  
23 rotation, I believe in your evidence - and it is  
24 confirmed at page 65 of your evidence - you note that  
25 the Ministry indeed used a rotation of 50 years; is

1 that correct?

2' I am referring now to what was used in  
3 the Forest Production Policy of 1972.

4 A. Yes.

5 Q. And you will see there a list of some  
6 assumptions--

7 A. That is right, I have that.

8 Q. --some 1972 assumptions. Can you  
9 advise the Board whether this means that the new forest  
10 will have a rotation of 50 years?

11 A. I believe that was one of the  
12 assumptions made in 1970 when the Forest Production  
13 Policy Options Document was developed. That would  
14 refer to those areas that received treatment.

15 Q. So in general you agree with the  
16 assessment that Anderson outlines at the top of page  
17 345 with respect to the issue of rotation?

18 A. Which particular sentence are you  
19 referring to?

20 Q. For example, right after the  
21 exclamation point, the sentence that reads:

22 "A rotation period of this length is  
23 inconsistent with the end of rotation  
24 yields assumed by the Ministry..."

25 Just stopping there.

1                   A. The financial analysis, and I think  
2                   that is what he is referring to in Table 5, assumes a  
3                   rotation of 50 years. The date 2020 is in Table 5.

4                   Q. That's fine. I would like to refer  
5                   you now to the next section of this paper entitled  
6                   Reforestation in Ontario: A General Assessment. I  
7                   refer you to the second paragraph on that page and I  
8                   will read that into the record:

9                   "The range of artificial regeneration  
10                  investments that can pass muster will  
11                  also depend upon how rigidly benefits are  
12                  defined. The Ministry's analysis and the  
13                  analysis of Section 1 of the present  
14                  paper rely entirely upon industrial  
15                  values, the value of the resulting  
16                  forest as eventual timber inputs for the  
17                  logging and processing sector. But to  
18                  what extent, if at all, should  
19                  reforestation expenditures be viewed as  
20                  providing general environmental benefits  
21                  associated with a standing forest. At a  
22                  minimum, precautions must be taken to..."  
23                  and he quotes Mr. Armson's paper from 1976 which is now  
24                  Exhibit 53 and the page reference there to page 70  
25                  would be page 175 in what is now Exhibit 53.

1 And that quote is:  
2 "At a minimum, precautions must be  
3 taken to '...differentiate between forest  
4 lands that can be exploited by logging  
5 and which will revegetate with no  
6 essential degradation of the site and  
7 those areas where logging will result in  
8 permanent damage'."

9 Do you agree with Dr. Anderson and Mr.  
10 Armson with respect to the matter that was just quoted,  
11 particularly the quote from Mr. Armson?

12 A. I believe that when one comes to  
13 treating Crown forests there are many other values of  
14 Crown forests apart from the value added; there are  
15 wages, jobs, environmental benefits, recreational  
16 benefits. Yes, there are other benefits that I think  
17 we must consider.

18 Q. Can you, in particular, indicate  
19 whether the Ministry of Natural Resources has  
20 identified areas where logging will result in permanent  
21 damage, as is referred to in the quote from Mr. Armson?

22 A. I am not aware of any specific areas  
23 where permanent damage will occur, apart from roads and  
24 landings which we have discussed before.

25 Q. You are not aware of permanent damage

1 arising from timber operations unrelated to roads?

2 A. I am not aware of --

3 Q. And the Ministry has not so  
4 identified; is that correct?

5 A. Not to my knowledge.

6 Q. Thank you. Just moving on to page -  
7 sorry - moving on to page 346 of what is now Exhibit  
8 151, Mr. Anderson there notes that:

9 "In many cases natural regeneration..."

10 Sorry, do you have the page, Mr. Cary?  
11 It is page 346 of what is now Exhibit 151. Actually  
12 this is going back to the bottom of page 345. Dr.  
13 Anderson begins by saying:

14 "The pursuit of selective regeneration of  
15 Ontario's forests can, however, be  
16 assisted by efforts to reduce the costs  
17 of reforestation."

18 And then, in particular, he notes:

19 "In many cases, natural regeneration can  
20 be substituted for artificial through an  
21 expansion of modified harvesting methods  
22 to replace large-sized clear cuts."

23 And he goes on to note:

24 "A reduction in the size of clear cut  
25 areas can permit greater reliance on

1 natural reseeding of the sites involved."

2 He notes:

3 "There may be an increased cost  
4 associated with doing it that way."

5 Do you agree with the reference there?

6 Do you agree with the quote I have just made from Dr.  
7 Anderson's paper respecting whether natural  
8 regeneration can be substituted for artificial  
9 regeneration through an expansion of modified  
10 harvesting methods to replace large-sized clear cuts?

11 A. I would agree that where it is  
12 warranted we use modified harvest cutting, which we  
13 consider artificial regeneration treatments, and where  
14 we prescribe those treatments under silvicultural  
15 ground rules in a management plan they are carried out.

16 But I don't agree that the objective is  
17 necessarily Dr. Anderson's objective. We operate by  
18 prescription, by silvicultural ground rules. So the  
19 decisions are made on a management unit level basis and  
20 those decisions are sound.

21 Q. Mr. Cary, you have just said that you  
22 describe or define modified harvesting as artificial  
23 regeneration?

24 A. The activity of modified harvest  
25 cutting, as I started -- as I started my evidence back

1 on Monday, a natural process, but under the  
2 Implementation Schedule that is considered to be an  
3 artificial treatment and it is recorded.

4 Q. Just so that I understand your  
5 evidence on this point, this exhibit, being Exhibit  
6 137, which you filed--

7 A. That is correct.

8 Q. --last week, puts the "x"s somewhere  
9 between artificial and natural, so it is neither on  
10 this exhibit; is that correct?

11 A. They are not under the artificial  
12 regeneration column, neither are they under the natural  
13 regeneration column.

14 Q. Thank you.

15 A. It is a natural process and we  
16 consider the activity to be artificial regeneration.

17 Q. And would you just, continuing then  
18 with Exhibit 136, confirm for me that the Forest  
19 Production Policy indicates that natural regeneration  
20 on 130,000 acres per year is expected for each of the  
21 options considered?

22 A. Yes.

23 Q. And I presume the Ministry considers  
24 natural regeneration to be a viable operation on at  
25 least that amount per year today. If not more; is that

1 correct?

2 A. The natural regeneration that we talk  
3 of in the Forest Production Policy Options Document is  
4 that which is totally unassisted by man. It is not  
5 modified harvest cutting. And that is an estimate of  
6 what they believed of those acres that would regenerate  
7 unassisted by man.

8 Q. That's fine. Mr. Osborn, on August  
9 8th, in response to a question from Mr. Martel  
10 respecting how much wood would have to be cut to get  
11 9.1-million cunits in the mill yard, you testified that  
12 you would need approximately 12-million cunits gross  
13 total value.

14 Do you recall that testimony?

15 DR. OSBORN: A. Yes, and I made the  
16 comment that that was a ballpark estimate given to  
17 answer Mr. Martel's question at the time.

18 Q. Just converting that figure to cubic  
19 metres, would that be approximately 33.9?

20 A. Something in that order.

21 Q. Thank you. I would like to refer you  
22 to one of our interrogatories, Question 2 from our  
23 Interrogatory.

24 MR. CARY: A. I have got it.

25 MR. CASTRILLI: Mr. Chairman, I would ask

1 this be made the next exhibit.

2 THE CHAIRMAN: Exhibit 152.

3 MR. CASTRILLI: (handed)

4 THE CHAIRMAN: Thank you.

5 ---EXHIBIT NO. 152: Interrogatory Question No. 2 posed  
6 by CELA.

7 MR. CASTRILLI: Q. Now, Mr. Cary, we  
8 asked you at that time a number of questions respecting  
9 what is known as the Charter for Ontario and what role  
10 it played with respect to the Production Policy.

11 And I understand from your answer that  
12 you didn't know what I was talking about.

13 MR. CARY: A. My answer is:

14 "We do not know what Charter you are  
15 referring to."

16 Q. Yes, that's right.

17 MR. CASTRILLI: To make it clear what I  
18 was referring to I would like to introduce the next  
19 exhibit as well which, as you might have guessed, is  
20 entitled the Charter for Ontario. (handed)

21 THE CHAIRMAN: Exhibit 153.

22 ---EXHIBIT NO. 153: Document entitled: Charter for  
23 Ontario.

24 THE CHAIRMAN: I didn't think election  
25 material was going to get into the hearing, but I guess

1 it is.

2 MR. CAMPBELL: Is this Mr. Martel's  
3 party?

4 MR. MARTEL: Just my amendment.

5 MR. CAMPBELL: Oh.

6 MR. CASTRILLI: Q. You will note, Mr.

7 Cary, if I could refer you to what would be page 2 of  
8 this document under the Item 7, Commitments of the then  
9 Government in Power. Item 7 reads:

10 "A commitment to replacing at least two  
11 trees for every one harvested henceforth  
12 in Ontario and to regenerating every acre  
13 harvested."

14 Now, Mr. Armson, in your testimony on  
15 August 10th you referred to the cutting of one tree and  
16 the planting of two trees as one of the myths you were  
17 concerned about the development of; is that correct?  
18 Do you recall that testimony?

19 MR. ARMSON: A. I believe I suggested  
20 there was a simplistic solution verging on a myth.

21 Q. Is it your testimony that the  
22 Ministry of Natural Resources had no involvement in the  
23 development of the two trees for one policy which is  
24 stated in what is now Exhibit 153?

25 MR. CARY: A. Who are you asking, Mr.

1       Castrilli?

2                   Q.   Well, let me see, who was around?

3       Mr. Cary, I think I will begin with you.   You can  
4       advise me if you can answer the question or not.

5                   MR. CARY:   A.   I do not know the answer  
6       to that question.

7                   MR. ARMSON:   A.   I believe the document  
8       that you are referring to - I haven't got a copy - but  
9       was that dated 1977?

10                  Q.   Yes, that's right.   As a matter of  
11       fact, on the first page of Exhibit 153 it is indicated.

12                  A.   Yes, I was not with the Ministry at  
13       that time.

14                  Q.   So you were not with the Ministry.

15                  Mr. Osborn, were you?

16                  DR. OSBORN:   A.   Yes, I was with the  
17       Ministry at that time.

18                  Q.   Do you know whether the Ministry of  
19       Natural Resources had any involvement in the  
20       development of the two for one policy?

21                  A.   No, sir, I do not know.

22                  Q.   You don't know?

23                  A.   I do not know.

24                  Q.   Mr. Gordon, I can presume the same?

25                  MR. GORDON:   A.   I don't know.

1 Q. Can you advise whether the statement  
2 of policy that appears in Exhibit 153 was not something  
3 the Ministry of Natural Resources had to take into  
4 account subsequent to May of 1977? Mr. Cary?

5 MR. CARY: A. Could you repeat the  
6 question?

7 Q. Did the Ministry of Natural Resources  
8 have to take into account Item 7 in the development of  
9 the 1972, or the implementation of the 1972 Forest  
10 Production Policy after May of 1977?

11 A. I cannot respond to that, I don't  
12 know. I simply was working in the field at that time.

13 THE CHAIRMAN: Mr. Castrilli, what was  
14 the status of this so-called Charter?

15 I take it if -- there is a statement at  
16 the very bottom of page 2 saying that if people vote  
17 for a particular party on June 9th, then this document  
18 may be translated into action.

19 Was it in fact ever translated into  
20 action?

21 MR. CASTRILLI: Well, that is the  
22 question I am asking the Ministry of Natural Resources.  
23 Mr. Chairman, if I could refer you to the first page --

24 THE CHAIRMAN: I mean, from the  
25 government's point of view, not from the Ministry's

1 response, but after that election, was there any other  
2 reference to this policy?

3 MR. CASTRILLI: Well, if I could perhaps  
4 go back to the first page you will see firstly under  
5 the dedication:

6 "Under a Progressive Conservative  
7 Government these commitments..."

8 And I take that to mean the commitments  
9 that we see on the second page:

10 "...which form part of a dynamic program  
11 of action will give each person in  
12 Ontario the assurance in which to shape  
13 his or her personal destiny."

14 Signed by William G. Davis. On the  
15 second page at the bottom, the quote is again from the  
16 then Premier and it says:

17 "The policies and commitments in this  
18 Charter..." et cetera, et cetera.

19 I take it to be a policy at the time it  
20 was stated, and what I want to know from these  
21 witnesses is: Was it ever taken into account in  
22 conjunction with the 1972 Forest Production policy?

23 I think it is a fair question.

24 MR. CARY: I am sorry, Mr. Castrilli, I  
25 can only reiterate that I am not aware of any change in

1 the Implementation Schedule that was a result of this  
2 particular statement.

3 Q. Can we take it that Ontario is not  
4 replacing at least two trees for every one harvested?  
5 Mr. Cary?

6 MR. CARY: A. It is a rather difficult  
7 sum to do. We have never counted how many trees that  
8 are harvested in one year. We have estimated that we  
9 are achieving that objective, but it is a very  
10 difficult one to be precise on. We have never counted  
11 how many trees the industry harvests.

12 THE CHAIRMAN: Well, what do you mean by  
13 objective, the objective being to count the trees?

14 MR. CARY: The objective of two trees for  
15 one, the objective of the commitment, to plant two  
16 trees for every one harvested. It is a difficult  
17 calculation when you are not exactly sure how many  
18 trees were cut down in any one year.

19 THE CHAIRMAN: Is that the policy that  
20 you are trying to fulfill?

21 MR. CARY: No, it is not.

22 MR. CASTRILLI: Q. So my question was:  
23 Are we replacing two trees for every one harvested and  
24 regenerating every acre harvested. Your answer is...?

25 MR. CARY: A. I believe to the first

1 part of that statement yes, my answer is yes. And I  
2 believe, as Mr. Armson has told us, that those areas  
3 that are harvested are regenerating.

4 Q. So your answer to the first part was  
5 yes. I asked -- I am not sure what the yes means.

6 Is Ontario replacing two trees for every  
7 one harvested?

8 THE CHAIRMAN: Answer just yes or no to  
9 that question. No elaboration, just yes or no.

10 MR. CARY: Yes.

11 MR. CASTRILLI: Q. The Ministry is  
12 replacing at least two trees for every one harvested?  
13 Your answer is yes? You can't nod, you need to you say  
14 yes or no.

15 MR. CARY: A. Yes.

16 MR. MARTEL: Can I ask a question. Is  
17 that not an impossibility, to replace two trees for  
18 every one harvested, when one takes into consideration  
19 that access, loading areas, sites and so on will take  
20 away a fair amount of the area which in fact had trees  
21 growing on them and, therefore, is not available for  
22 regeneration?

23 MR. CARY: Mr. Martel, I think we have  
24 used the 5 per cent number for roads and landings. So  
25 we do not plant roads and landings, so there is a

1 reduction in area from the gross area harvested. But I  
2 believe that, yes, it is possible to do that.

3 MR. CASTRILLI: Q. Mr. Cary, my question  
4 was: Is the Ministry replacing two trees for every  
5 one, and you have now said yes. Is that evidence to be  
6 found in Panel 4?

7 MR. CARY: A. No.

8 Q. Which panel will be telling us or  
9 verifying that?

10 A. I don't believe any panel has talked  
11 to that -- has or will talk to that.

12 Q. And no information has been filed  
13 that verifies that either; is that correct?

14 A. That's correct.

15 Q. Thank you. Now, with respect to the  
16 second part of the Charter, is Ontario regenerating  
17 every acre harvested or, if you want to put it in  
18 metric terms, is Ontario regenerating every hectare  
19 harvested?

20 A. What do you mean by regenerating, Mr.  
21 Castrilli?

22 Q. As it is stated in the policy.

23 A. We are not treating with a  
24 regeneration treatment every acre that is harvested.

25 Q. Thank you. Now, if we could continue

1 with what is now Exhibit 152, that being the second  
2 interrogatory we filed, under Item (d) we asked:

3 "What role did the districts or regions  
4 play in development of the policy that  
5 resulted in the figure of 9.1-million  
6 cunits?"

7 The answer you provided was, at the  
8 bottom of page 152 -- no, Exhibit 152:

9 "The target of 9.1-million cunits was a  
10 Cabinet choice and not a Ministry of  
11 Natural Resources' option. As such,  
12 there was no district or regional role in  
13 the development of this figure."

14 Mr. Cary, could you advise the Board what  
15 role did the regions -- excuse me, did the districts  
16 play in development of any of the policy options that  
17 went to Cabinet with respect to the Forest Production  
18 Policy?

19 A. I am not aware of any district role  
20 in the development of the policy options. They were  
21 developed in 1970.

22 Q. The third question we asked on the  
23 page -- excuse me, on Exhibit 152 was:

24 "Did the districts provide numbers to the  
25 regions and Toronto about what volume of

1 wood for industrial use could be supplied  
2 by each district. If they did, please  
3 provide the numbers each district  
4 supplied to the regions and Toronto and  
5 any supporting documentation?"

6 Your answer was:

7 "No, districts did not directly provide  
8 numbers to Toronto in the way described.  
9 The basic inventory data for the  
10 districts was analysed by staff."

11 Which staff are you referring to there,  
12 district staff or MNR Toronto staff?

13 A. I was unable to answer specifically  
14 because I had no knowledge of exactly who was involved.  
15 So there may have been -- I suggest that it was main  
16 office, but I simply -- I simply cannot tell exactly.

17 Q. Sorry, just so I understand the  
18 response as written on Exhibit 152, your reference to  
19 staff you believe was to main office staff?

20 A. I believe so.

21 Q. Thank you. The last question we  
22 asked was:

23 "Please provide the numbers that were  
24 reassigned down to each district by the  
25 province."

1                   That is item (d). And your answer was:  
2                   "We do not have a comprehensive breakdown  
3                   of the district numbers. We believe that  
4                   this 15-year old information is not  
5                   available from every district. Districts  
6                   now use District Land Use Guideline  
7                   targets as a general benchmark. Specific  
8                   levels of activity are developed for each  
9                   management unit in the timber management  
10                  planning process."

11                 I am wondering, if there was an  
12                 assignment of the numbers by Toronto to the districts,  
13                 why doesn't Toronto have the numbers?

14                 A. There was not an assignment from  
15                 Toronto to the districts, as far as I know. I know  
16                 there was an assignment from Toronto to regions, but I  
17                 am not aware and don't believe that Toronto ever  
18                 assigned numbers to the districts. That was a regional  
19                 mandate.

20                 Q. Did regions exist in 1972?

21                 A. Yes, in a different -- there was a  
22                 different setup. The Ministry was reorganized in 1973.  
23                 There were planning regions, but I am getting into an  
24                 area where I wasn't working for the Ministry of Natural  
25                 Resources.

1                   There was a different organizational  
2           framework in '72 than there was in '73 when the Forest  
3           Production Policy Implementation Schedule was  
4           developed. There was a transition period there.

5                   Q. So, Mr. Cary, if I understand your  
6           testimony then, the Ministry of Natural Resources  
7           cannot advise the Board on a district-by-district basis  
8           what the districts said they could supply, or what  
9           Toronto told the districts they would have to supply  
10          under the Forest Production Policy; is that correct?

11                  A. That's correct.

12                  Q. Thank you.

13                  MR. CASTRILLI: Mr. Chairman, I am sorry,  
14          when would the Board be intending to take a break?

15                  THE CHAIRMAN: Well, we didn't  
16          re-commence until about 3:30, probably not until a  
17          quarter after 4:00.

18                  MR. CASTRILLI: Sorry, you just said  
19          3:30? 2:30.

20                  THE CHAIRMAN: Sorry, 2:30.

21                  MR. CASTRILLI: So we would be intending  
22          to break approximately a quarter after four, just that  
23          I am getting into a reasonable size area.

24                  THE CHAIRMAN: Well, how about around  
25          4:15?

1 MR. CASTRILLI: That will be fine.

2 THE CHAIRMAN: And then we can have a  
3 short break and then have a final session before we  
4 break for the day.

5 MR. CASTRILLI: That's fine, thank you.

6 Q. Mr. Cary, I understand from your  
7 testimony that when the government's Implementation  
8 Schedule was prepared it was assumed that each acre  
9 which received a regeneration treatment would yield 20  
10 cunits of wood per acre at rotation age, and that land  
11 did not receive any silvicultural work would yield 10  
12 cunits of acre -- of wood per acre, that is from  
13 natural regeneration; is that correct?

14 MR. CARY: A. That's correct.

15 Q. Could you advise the Board what the  
16 source of that expectation was, particularly with  
17 respect to an increased yield from silvicultural  
18 treatments such that we would get twice the yield of  
19 the natural forest?

20 A. The yield assumptions that were made  
21 in 1970 were, as I think I said in my testimony,  
22 average yields across all species and site classes.

23 It was presumed that -- it was assumed  
24 that we would - because of your regeneration  
25 treatments, we would double the yield of the new forest

1 over the old forest. It was based on an examination of  
2 the normal yield tables and professional observations  
3 at the time.

4 Q. Okay. I understand that was the  
5 expectation in 1972 and I understand that the Ministry  
6 is now working on a new -- potentially a new  
7 reconsideration of the issue of what the yield will be  
8 from the new forest; is that correct?

9 A. That's correct.

10 Q. What is the Ministry's best guess as  
11 to its new estimate? Will it be more than 20 cunits  
12 per acre or less?

13 A. I would like to defer that question  
14 to Dr. Osborn or Mr. Gordon who have discussed those  
15 new yield curves in their discussion of the modeling.

16 I cannot recall what exactly those yield  
17 curves produced. There were four yield curves set for  
18 different levels of regeneration treatment.

19 Q. I would be content to have -- sorry,  
20 you said Dr. Osborn--

21 A. Yes.

22 Q. --or Mr. Gordon?

23 A. Or Mr. Gordon.

24 Q. I would be content to have either one  
25 of them or both of them answer the question.

1 DR. OSBORN: A. Document or page 280A,  
2 which was Document 146, was a graphic presentation  
3 showing for the four levels of new forest the estimated  
4 yields. That's page 280A, and those values are given  
5 in metric terms. And to make life a little bit easy,  
6 20 cunits per acre is 140 cubic metres per hectare.

7 And if you look, therefore, at page 280A,  
8 you can see at age 50 that the Level 1 kind of new  
9 forest would produce something in the order of 30  
10 metres cubed; that the Level 2 kind of new forest at  
11 age 50 would produce something in the order of 70  
12 metres cubed, which would be approximately 10 cunits  
13 per acre; that the Level 3 new forest, which is the  
14 plantations, would produce something very close to 145  
15 or 150 cubic metres per hectare; and the Level 4,  
16 something in the order of 175 to 180.

17 Q. Dr. Osborn, just for ease of  
18 reference, you are referring to page 280A--

19 A. 280A, right.

20 Q. --of Exhibit 146; is that correct?

21 A. Yes, sir.

22 Q. And the numbers you just gave of 30,  
23 70, 145 and 175 would relate to the new forest  
24 extensive, new forest basic, new forest intensive and  
25 new forest elite respectively; is that correct?

1 A. Correct, new forest 1, 2, 3 and 4.

2 Q. Thank you. Sorry, were you finished  
3 with your answer?

4 A. Yes.

5 Q. Thank you. Mr. Cary, can you advise  
6 the Board when the Ministry of Natural Resources ceased  
7 to believe the 20 cunits of wood per acre at rotation  
8 age assessment for the new forest?

9 MR. CARY: A. We started to examine  
10 these assumptions quite seriously in 1982. 1982.

11 Q. I am showing you a Ministry of  
12 Natural Resources advertisement which appeared in the  
13 February, 1981 edition of the Canadian Pulp and Paper  
14 Industry. (handed)

15 MR. CASTRILLI: Mr. Chairman, I would  
16 like to make this the next exhibit.

17 THE CHAIRMAN: Exhibit 154.

18 ---EXHIBIT NO. 154: Ministry of Natural Resources  
19 advertisement in the February,  
20 1981 edition of the Canadian Pulp  
and Paper Industry.

21 MR. CASTRILLI: Q. Mr. Cary, you will  
22 note on what is the page -- the only page apart from  
23 the cover of what is now Exhibit 154, there is an ad  
24 entitled: In Ontario We Are Going For The Big Yield.

25 Were you responsible for the production

1 of this ad?

2 MR. CARY: A. No, I was not.

3 Q. You will note in the second  
4 paragraph -- you will note at the bottom of the page it  
5 is a Ministry of Natural Resources' ad?

6 A. That's correct.

7 Q. In the second paragraph you will note  
8 that it states that:

9 "The Ministry of Natural Resources is  
10 planning to harvest 25 cunits of wood per  
11 acre on the province's new forest."

12 Can you advise the Board what the basis  
13 is for the Ministry of Natural Resources claiming in  
14 this ad that the new forest will produce two and a half  
15 times more wood per acre than the old forest?

16 A. I am unaware of the basis for this  
17 advertisement.

18 Q. Just so I understand the status of  
19 the Production Policy at this point in time, is the  
20 Ministry still operating on the assumption of 20 and  
21 10, notwithstanding its examining alternate scenarios?

22 A. The existing 1972 Policy still holds.

23 Q. Thank you. Which Ministry of Natural  
24 Resources' prediction should the Board believe, 20  
25 cunits in your evidence or the 25 cunits in the -- what

1 is now Exhibit 154?

2 A. It is my evidence that, at this point  
3 in time, the existing Forest Production Policy  
4 objective is the Ministry objective.

5 Q. Of 20 cunits?

6 A. That's correct.

7 Q. Thank you. Do you have any idea how  
8 much money was spent on the production of this ad?

9 A. I have no idea.

10 Q. Mr. Cary, can you confirm some basic  
11 math for me. 10 cunits per acre divided by 100 years,  
12 convert it to metric would equal a mean annual  
13 increment of .6997 cubic metres per hectare per year.

14 Would you accept that subject to  
15 verification?

16 MRS. KOVEN: Could you repeat that  
17 number?

18 MR. CARY: It would have to be verified,  
19 and I would ask Dr. Osborn or Mr. Gordon verify that.

20 DR. OSBORN: I will verify it, Mr.  
21 Castrilli.

22 MR. CASTRILLI: Thank you. It is  
23 relation to the natural regeneration option, obviously.

24 THE CHAIRMAN: What was the last number,  
25 the result?

1 MR. CASTRILLI: The result is a mean  
2 annual increment of .6997 cubic metres per hectare per  
3 year.

4 Q. And I understand Dr. Osborn will  
5 verify whether that number is the number that you get  
6 when you convert 10 cunits per acre divided by 100  
7 years.

8 DR. OSBORN: A. An area of approximately  
9 70 metres cubed per hectare over the hundred year  
10 period, .7.

11 Q. So your answer is yes, you agree?

12 A. Correct.

13 Q. Thank you.

14 THE CHAIRMAN: It must be nice to be able  
15 to do it in your head.

16 MR. CASTRILLI: Q. Or did you use a  
17 table?

18 DR. OSBORN: A. No, sir.

19 MR. CASTRILLI: Q. Thank you.

20 Now, that figure of a mean annual  
21 increment of .6997 cubic metres per hectare per year is  
22 what the Ministry assumed for land that did not receive  
23 an artificial regeneration treatment; is that correct,  
24 Mr. Cary? That's the 10 cunits per acre.

25 MR. CARY: A. Yes.

1 Q. In general, would it be fair to say  
2 that the lower the mean annual increment the greater  
3 the land base needed to obtain a specified amount of  
4 wood?

5 A. Or a longer time. Yes to both.

6 Q. Yes to both. Thank you.

7 Mr. Cary, I am showing you an excerpt  
8 from a document you have been given notice of. It is  
9 entitled: Growth of Forests in Canada, Part II, a  
10 Quantitative Description of the Land Base and the Mean  
11 Annual Increment, and it is by Messrs. A. Bickerstaff,  
12 W. L. Wallace and F. Evert.

13 Would you confirm that's a document you  
14 were given notice of, or it is an excerpt of that  
15 document?

16 A. Yes.

17 Q. Thank you.

18 MR. CASTRILLI: Mr. Chairman --

19 THE CHAIRMAN: Exhibit 155.

20 ---EXHIBIT NO. 155: Excerpt from a document entitled:  
21 Growth of Forests in Canada, Part  
22 II, a Quantitative Description of  
the Land Base and the Mean Annual  
Increment.

23 MR. CASTRILLI: Q. Mr. Cary, I would  
24 like to refer you to the only page I have reproduced in  
25 Bickerstaff, page 108.

1 MR. GORDON: A. Could it be possible to  
2 get a copy of that also, please?

3 Q. Oh, a copy of the...

4 A. Yes. We are having difficulty  
5 following.

6 Q. I have no more extras. Sorry, I do  
7 have one extra. (handed)

8 A. Thank you.

9 MR. CARY: A. Mr. Castrilli, despite the  
10 fact you gave me notice of this, I have not read this  
11 article.

12 Q. We are just going to talk about the  
13 chart.

14 You will see on that page that  
15 Bickerstaff, at the top -- this is Table 34, excuse me.  
16 You will see under the heading: Bickerstaff, Wallace  
17 and Evert, 1980, that Bickerstaff indicates that a mean  
18 annual increment of 1.7 cubic metres per hectare per  
19 year is a number for Ontario forests.

20 Do you see that on that page?

21 A. I do.

22 Q. Can you confirm for me, Mr. Cary,  
23 that by assuming a lower mean annual increment; i.e.,  
24 .69, isn't the Ministry of Natural Resources saying  
25 that the second growth forest would have a lower rate

1       than the estimate by Bickerstaff for the natural forest  
2       of 1.7?

3                   A. Can you confirm for me that this --  
4       these are old forest, existing forest numbers?

5                   Q. Will you accept that subject to  
6       verification, I can't do it on this one page. That's  
7       my understanding. My understanding is it's for the  
8       non-managed forest.

9                   A. And Bickerstaff then suggests that  
10      1.7 is the average mean annual increment per metre --  
11      cubic metre per hectare.

12                  Q. Per year.

13                  A. Per year. And what is your question,  
14      I apologize? I am having trouble following this.

15                  Q. That is quite all right, Mr. Cary, I  
16      will repeat the question.

17                  By assuming a lower mean annual increment  
18      than Bickerstaff, isn't the Ministry in fact assuming a  
19      lower mean annual increment for the second growth  
20      forest than what Bickerstaff estimates for the natural  
21      forest?

22                  A. Yes.

23                  Q. Thank you.

24                  MR. FREIDIN: Can you provide us with the  
25      book?

1 MR. CASTRILLI: The general literature.  
2 It's my only copy. In fact it is from your -- no, it  
3 is not from your library.

4 MR. FREIDIN: If you are finished with  
5 it, could I have it, that book?

6 MR. CASTRILLI: Sure. (handed) It is my  
7 only copy.

8 Q. Isn't the Ministry, therefore,  
9 admitting that current harvesting techniques in Ontario  
10 are lowering the productivity of Ontario forests?

11 MR. CARY: A. I wonder what Mr.  
12 Bickerstaff's premises are. I am just not familiar with  
13 them. Is it all species?

14 I simply can't comment on that. Perhaps  
15 Dr. Osborn would like to comment, he is much more  
16 familiar with this area than I am.

17 DR. OSBORN: A. Mr. Chairman, if I may.  
18 This particular paper by Dr. Bickerstaff essentially  
19 was a synthesis from all the provincial agencies of the  
20 basic forest resource inventory data. So these data  
21 for Ontario are based upon essentially the provincial  
22 FRI, they are, therefore, those of the forest as of  
23 approximately 1980, which is the time the data were  
24 collected for this paper, approximately.

25 Therefore, predominantly the existing or

1 old forest, they embrace all species and essentially it  
2 is a summation of the total volume described in the  
3 province divided by the total area in the province, and  
4 some proxy of the rotation to get the per year basis.

5 Q. Wasn't the --

6 MR. CARY: A. But, Dr. Osborn, that is  
7 gross, isn't it. Are those gross totals?

8 DR. OSBORN: A. Without looking at the  
9 paper in detail, I am not quite sure.

10 MR. CARY: A. And I think the 10 cunits  
11 was net merchantable, I believe. That is the yield  
12 that was -- for the Forest Production Policy was a net  
13 merchantable figure.

14 Q. Let's turn to -- let's turn back to  
15 Exhibit 136, page 57, paragraph 3.

16 A. What exhibit?

17 Q. Exhibit 136 is the Forest Production  
18 Policy.

19 A. 136. And what page, Mr. Castrilli?

20 Q. Page 57. You will see in the last  
21 full paragraph on that page the paragraph beginning:

22 "The 136,000 acres..."

23 Do you have that paragraph, Mr. Cary?

24 A. Yes.

25 Q. You will see the second sentence:

1 "The figure of 20 cunits per acre is  
2 higher than the present 11 cunits per  
3 acre."

4 Do you see that comment?

5 A. Yes.

6 Q. Isn't that telling the Board that the  
7 first time cut of the natural forest or old forest is  
8 producing 11 cunits per acre?

9 A. I believe that 11 cunits per acre  
10 came from the yields that were obtained from the  
11 cut-over of the day.

12 I presume they are net merchantable, but  
13 I have no idea if that 11 is net merchantable gross  
14 total. So, yes, they were conservative perhaps, they  
15 forecast 10 cunits per acre.

16 Q. Well, paragraph 9 of your evidence  
17 you are telling the Board that after cutting with  
18 natural regeneration MNR on the second forest is  
19 expecting only 10 cunits per acre.

20 Isn't that -- isn't 10 less than 11?

21 A. That's right.

22 Q. Isn't that another admission by the  
23 Ministry that current harvesting practices are  
24 degrading forest productivity?

25 A. Well, 10 and 11 are quite close, but

1 10 is below 11.

2 Q. So the answer to my question is yes?

3 A. Yes. 10 is lower than 11, not  
4 degrading the natural forest, I don't believe that  
5 statement.

6 Q. So your answer to my question is 10  
7 is lower than 11, period?

8 A. That's correct.

9 Q. And you don't accept the proposition  
10 that when you come up with a figure of 10 for the  
11 second forest, vis-a-vis natural regeneration, that  
12 that isn't telling the Board that harvesting techniques  
13 will in fact be degrading forest productivity since you  
14 are currently getting 11?

15 A. I don't believe that you can make  
16 that conclusion.

17 Q. It is a conclusion you are not  
18 prepared to make; is that correct?

19 A. That's correct.

20 DR. OSBORN: A. Mr. Chairman, if I might  
21 add something regarding the thoughts of the day in 1972  
22 as to the meaning and implications of the 10 and 11  
23 cunits per acre figure.

24 In 1972, the utilization at that time was  
25 strongly and primarily softwood oriented. At that

1 point in time, aspen or poplar was a species of  
2 relatively low importance in its utilization and in the  
3 looking at the 10 and 11 cunits per acre, the aspen  
4 was, therefore, dismissed. And so looking at the  
5 future might produce 10 was a thought particularly and  
6 strongly along softwood lines.

7 Now, since that time of 1972 much has  
8 changed as regards to utilization and, hence, the  
9 comment Mr. Cary makes, as we have seen in the SOARS  
10 data, is the productivity of those sites, natural or  
11 otherwise, has included a component of hardwood and  
12 other species which, in 1972, were not necessarily  
13 being utilized.

14 MR. CASTRILLI: Mr. Chairman, actually  
15 this would be a convenient place to break because I  
16 will be going to a new fairly large area.

17 THE CHAIRMAN: Okay. The Board will take  
18 another 20-minute break.

19 ---Recess taken at 4:10 p.m.

20 ---Upon resuming at 4:35 p.m.

21 THE CHAIRMAN: Thank you. Be seated,  
22 please.

23 Mr. Castrilli, we do not plan on sitting  
24 beyond 6:00 at the outside, so if you would find an  
25 appropriate place to adjourn, we would appreciate it.

1 MR. CASTRILLI: Thank you, Mr. Chairman.

2 Q. Mr. Cary, I would like to take you  
3 back to your curriculum vitae. I notice at page 1  
4 under the heading: Task Force and Committees, you have  
5 in the past been on policy committees; is that correct?

6 MR. CARY: A. That was an OPFA  
7 Committee. Is that the No. 1 you are referring to?

8 Q. Yes, that's right.

9 A. That's correct.

10 Q. And I notice at page 8 of your  
11 evidence, the second paragraph, still in your CV--

12 A. Yes.

13 Q. --you were involved and responsible  
14 for the evaluation and implementation of revisions to  
15 the Forest Production Policy Implementation Schedule;  
16 is that correct?

17 And in the first paragraph -- sorry, is  
18 that correct?

19 A. Yes.

20 Q. And in the first paragraph you have  
21 had and have been involved in examining delivery of  
22 regional timber management program and whether the  
23 process conforms to certain standards, guidelines,  
24 policies and procedures; is that correct?

25 A. That's correct.

1 Q. And on page 9, the last paragraph,  
2 your role at this time is to develop evidence and  
3 advise counsel on technical and policy matters?

4 A. That's correct.

5 Q. And you have continued to be involved  
6 and you are now involved in the Forest Production  
7 Policy revisions; is that correct?

8 A. Yes.

9 Q. Can you confirm for me and, as I  
10 recall, on August 29th you were qualified -- excuse me,  
11 August 8th of this year you were qualified by Mr.  
12 Freidin as an expert in forestry with particular  
13 expertise on forest production and, of course, you are  
14 the witness who gave evidence on the Forest Production  
15 Policy options; is that correct?

16 A. That's correct.

17 Q. Would you agree -- well, let me ask  
18 you: As an analyst of forest production policy for the  
19 Ministry, does it not disturb you that in his paper Mr.  
20 Anderson -- Dr. Anderson takes fundamental issue with  
21 the way the 1972 Forest Production Policy benefit ratio  
22 was developed?

23 A. I had not read Dr. Anderson's policy  
24 and I read it first on Friday.

25 Q. Having read it, does it not disturb

1 you that Dr. Anderson takes fundamental issue with the  
2 way the 1972 Forest Production Policy benefit/cost  
3 ratio was developed?

4 A. I am not an economist.

5 Q. I didn't ask you in your capacity as  
6 an economist, which you are not, I asked you in your  
7 capacity as a forest production policy analyst?

8 A. I have read his article and he makes  
9 some points in his article that he disagrees with the  
10 financial analysis that was conducted in 1972.

11 Q. And as an expert in forest  
12 production, which is what you were qualified as, are  
13 not the conclusions of Dr. Anderson something you, in  
14 your capacity with the Ministry of Natural Resources,  
15 would want to take into account in developing any new  
16 forest production policy, irrespective of the fact you  
17 are not economist?

18 A. I would want to make sure that the  
19 economic analysis or any financial analysis that is  
20 done at this time is the appropriate one.

21 Q. Thank you. Dr. Osborn, we were  
22 discussing 20 cunits before the break and what it now  
23 means in cubic metres per hectare.

24 Could you, just for the benefit of the  
25 Board, advise what 10 cunits per hectare would be in

1 cubic metres per hectare?

2 DR. OSBORN: A. Approximately 70 cubic  
3 metres per hectare.

4 Q. And can you confirm for me, Dr.  
5 Osborn, that on Exhibit 146, page 280A, the scenario  
6 for the new forest, which I understand -- oh, sorry,  
7 the new forest extensive would be the natural  
8 regeneration scenario; is that right?

9 A. That's correct.

10 Q. And I note you indicated that that  
11 would be 30 cubic metres per hectare?

12 A. At age 50.

13 Q. At age 50.

14 A. That's correct.

15 Q. Would that be the harvest age?

16 A. No, not necessarily. In fact, very  
17 unlikely. If you remember the models that were run,  
18 the rotation age in fact for the new forest was not age  
19 50.

20 Q. As I recall it was 100.

21 A. If I recall it was 150.

22 Q. 150. And what would you anticipate  
23 the cubic metres per hectare to be at age 150?

24 A. If I look at the graph on page 280A,  
25 which goes to something like age 115 and 120 and the

1 shape of that curve, I would estimate the value of  
2 something in the order of 125 to 130 metres cubed per  
3 hectare at age 150, extrapolating from the data.

4 Q. Do you normally expect the forest to  
5 be cut at age 150?

6 A. No. As was explained in the model,  
7 the rotation age was put in the model to calculate the  
8 MAD, it was not put in there to indicate anything to do  
9 with cutting age.

10 Q. What year would you anticipate or at  
11 what year could one reasonably anticipate the natural  
12 regeneration new forest to be cut at?

13 A. Mr. Castrilli, in forest management  
14 you don't go and look for specifically forest 1, 2, 3  
15 and 4, you treat the forest as a whole.

16 And so, stand-by-stand, it would be  
17 evaluated: Am I the most appropriate stand to be cut  
18 in this ensuing five years, whether I have come from  
19 natural regeneration, seeding, planting or whaerever.  
20 So it is all part of the overall allocation of the  
21 maximum allowable depletion in any planning period.  
22 There is no single answer to your question, therefore.

23 Q. So I am learning. If we were to cut  
24 at the 50-year rotation with a 30 cubic metre per  
25 hectare yield, you would agree with me that is

1 currently below the 10, or the 70 cubic metres per  
2 hectare assumed in the 1972 Forest Production Policy;  
3 is that right?

4 A. I agree.

5 Q. Thank you. So if one were to cut at  
6 that time, the prognosis on the yield from natural  
7 regeneration would be less than 10 cubic metres; is  
8 that right?

9 A. That is also correct.

10 Q. Would you agree that that, therefore,  
11 would mean that there would be a lower productivity  
12 yield expected at that time?

13 A. No.

14 Q. Why not?

15 A. Because in the model, in the  
16 extensive forest Level 1 there was a 20-year gap where  
17 nothing happened in the assumptions in the model.

18 Q. I am speaking of a 50-year rotation  
19 for the forest.

20 A. Yes, but the trees at that time, Mr.  
21 Castrilli, are not 50 years old.

22 Q. For the purposes of the 1972 Forest  
23 Production Policy you assumed a rotation of 50 years;  
24 did you not?

25 A. Yes.

1 Q. So if you happen to assume it again  
2 and you actually did cut some of that forest in future  
3 you are assuming a smaller -- a lower yield in the  
4 second forest than you are getting, or you got on the  
5 first one; is that not correct?

6 A. If you cut at age 50 with 30 cubic  
7 metres per hectare and you assumed you were going to  
8 get 70, yes, then you would under that assumption.

9 Q. Thank you. Mr. Cary, I don't recall,  
10 maybe you can confirm for me, have you advised the  
11 Board what the total cost of the program has been under  
12 the Forest Production Policy since it came into effect,  
13 which I guess was fiscal year 1973?

14 MR. CARY: A. No, we have not told the  
15 Board that value.

16 Q. Would you like to take this  
17 opportunity?

18 A. No, I have no idea as I sit here of  
19 that cumulative active value over the last 15 years.

20 Q. As I recall from Exhibit 138, your  
21 Exhibit 138--

22 A. Yes.

23 Q. --the option actually accepted by the  
24 Cabinet which was not one of the options that were part  
25 of the policy.

1 A. That is Table 4.

2 Q. It is called Table 4, Summary of  
3 Policy Options.

4 A. And that is...

5 Q. That is Exhibit 138.

6 A. On page 40 of Exhibit 136. Yes.

7 Q. Well, that exhibit, however, doesn't  
8 have -- or that page doesn't have the additional line  
9 you added in Exhibit 138?

10 A. That's correct, Mr. Castrilli.

11 Q. So we are working -- I would suggest  
12 it would be easier to work from Exhibit 138. Do you  
13 have that page -- or do you have that exhibit?

14 A. I do.

15 Q. Now, if I understand your testimony  
16 correctly, that Cabinet chose the 390,000 acres treated  
17 per year?

18 A. It chose 9.1, or rather it --

19 Q. It chose 9.1 and to get 9.1 per year  
20 you would have to cut 390,000?

21 A. Based on the assumptions.

22 Q. Right. And I understand that if one  
23 were to cut 390,000 acres per year -- or treat 390,000  
24 acres per year, the figure anticipated was a figure  
25 somewhere between option No. 3, which was \$15-million

1 per year, and option No. 4, which is \$29-million per  
2 year.

3 Now, I understand from your testimony  
4 that in fact, of course, when the policy kicked in,  
5 what I guess was the beginning of fiscal year 1973, you  
6 would not have been treating 390,000 acres per year  
7 and, in fact, may not yet be treating 390,000 acres per  
8 year; is that correct?

9 A. That's correct.

10 Q. What is your understanding of what in  
11 fact has been spent in the attempts to ultimately reach  
12 that figure?

13 A. I do not have with me now the actual  
14 costs that have been spent on the program to date,  
15 either by year or total.

16 Q. Now, when you spoke about your answer  
17 to the Ministry of Environment re: the costs --  
18 regarding the costs for the reforestation programs, you  
19 referred to a figure of over \$324-million for permanent  
20 nurseries, greenhouse facilities, seed extraction  
21 plants and forest access roads. Do you recall that  
22 testimony?

23 A. I do. May I find that?

24 Q. Yes, Mr. Cary.

25 A. Thank you. Yes, I have it.

1 Q. Now, were those the costs  
2 contemplated by the Forest Production Policy option --  
3 well, Forest Production approved by Cabinet or are  
4 those additional costs?

5 A. Those costs were -- those  
6 expenditures, rather--

7 Q. Expenditures, yes.

8 A. --were money that we spent inbetween  
9 '81 and '87 on the expansion and the creation of the  
10 infrastructure that we needed to deliver the program,  
11 and they were not contemplated in 1972.

12 Q. So the \$324-million then covers the  
13 period 1981-87 and was not in fact contemplated by the  
14 original Forest Production Policy expenditures; is that  
15 correct?

16 A. That is correct.

17 Q. Thank you. I would like to refer you  
18 to Document 9 of your evidence. It is the report by  
19 Mr. Dixon, page 83.

20 A. I have that page.

21 Q. It is Table 2 in particular. The  
22 table has a sub-heading on the left-hand side of the  
23 page of: Area Not Regenerated, and if we look on the  
24 right-hand side it says roughly 1.2-million acres.

25 And then there is a further heading

1 called: Area Not Treatable of 871,000 hectares.

2 Can you confirm for me that the tables  
3 show that the area not regenerated is reduced by  
4 declaring a portion of it not treatable; that is the  
5 871,000?

6 A. The line that says: Area Not  
7 Regenerated, is the difference between the area of cut  
8 and the total regeneration in the Implementation  
9 Schedule proposal column, and that is area that is not  
10 treated, not not regenerated, it hasn't received a  
11 regeneration treatment. That is what the meaning of  
12 that row is.

13 Q. The 1.2-million row?

14 A. The 1.2 is the actual that was  
15 estimated by the field -- I am sorry, it is not. It is  
16 the, again, the subtraction of the area cut and the  
17 area treated under total regeneration and we get  
18 1.2-million then which is the actual rather than the  
19 proposed. And that has not received a regeneration  
20 treatment.

21 And to go on, the untreatable --  
22 non-treatable area that showed under actual is an  
23 estimation by field foresters that that part of the  
24 harvested area we were unable to treat for some reason;  
25 too stony, residual tree species, too wet, too rocky.

1 Those reasons.

2 Q. So would you agree with me that the  
3 1.2-million figure was reduced by 871,000 by declaring  
4 that 871,000 not treatable, which was my original  
5 question?

6 A. That's correct.

7 Q. Thank you. I refer you to page 71 of  
8 the same document, Item 6 at the top of the page.  
9 Sorry, page 71 of Exhibit 135 of the panel evidence.

10 At the top of the page we see the second  
11 page of Mr. Dixon's Executive Summary and the item at  
12 the top of the page is Item 6. Mr. Dixon notes:

13 "22 per cent of the total area cut,  
14 almost 872,000 acres, are classified as  
15 non-treatable. In 1980, this  
16 classification was applied to 29 per cent  
17 of the cut-over area. This had the  
18 effect of eliminating the regeneration  
19 gap but by a method of land  
20 classification rather than by increasing  
21 the area artificially regenerated to  
22 cover the area cut."

23 Do you agree with Mr. Dixon's summary?

24 A. That is Mr. Dixon's conclusion from  
25 the table that you discussed on page 83.

1 I should just like to say that Mr. Armson  
2 has talked in previous evidence about this very topic,  
3 a regeneration gap and, 'as I say, he has talked about  
4 this gap, he has talked about the myth. That area is  
5 regenerating, as evidence has been presented. And so  
6 that that is the context that I believe is appropriate  
7 when one reads that particular conclusion by Mr. Dixon.

8 Q. Do you agree with Mr. Dixon's  
9 assessment of what he saw at the time and the way he  
10 characterized what he saw?

11 A. Mr. Dixon, I presume, reported on  
12 exactly what happened and then made his conclusions  
13 about that.

14 Q. Would you agree with me that the way  
15 the area not regenerated was reduced makes it appear  
16 that a substantial portion of treatable land was being  
17 regenerated because you have a much smaller area  
18 remaining to regenerate?

19 A. Well, the bottom line says:  
20 Available for regeneration.

21 Q. That's right, by removing 872,000  
22 acres?

23 A. We were unable to treat with current  
24 technology at the time and by field estimation during  
25 those eight years, 73-80, some 871,000 acres, I agree.

1                   Q. You have reduced a backlog of 870,000  
2 acres by creating the category of non-treatable;  
3 correct?

4                   A. That category was created, called  
5 untreatable or not treatable, yes.

6                   Q. Now, the same page, 83, Mr. Dixon  
7 indicates that these non-treatable areas may be  
8 permanently lost to production. Do you see that  
9 paragraph under the table?

10                  A. I do.

11                  Q. Can you advise the Board of what kind  
12 of harvesting method was permitted on these lands that  
13 would result in that kind of an assessment?

14                  A. Well, firstly, I would like to read  
15 the whole sentence.

16                         "If the non-treatable classification is  
17 correct,..."

18                  As I have said, that's a field  
19 estimation. If that's correct, then Mr. Dixon makes  
20 that statement, that 22 per cent of the area cut may be  
21 permanently lost to production. I do not agree with  
22 that statement.

23                  Q. Well, that wasn't the question I  
24 asked you. I asked you what kind of harvesting method  
25 was permitted on these lands?

1                   A. These lands were harvested as part of  
2 the cut-over using the equipment of the day.

3                   Q. Were they clear cutting on these  
4 lands?

5                   A. I suspect some of that area was clear  
6 cut, yes.

7                   Q. Now, I understand that the Ministry  
8 of Natural Resources' statistics reports classify the  
9 cut-over differently these days. Do you have Exhibit  
10 29 before you?

11                  A. I do.

12                  Q. Page 16.

13                  MR. FREIDIN: What page?

14                  MR. CASTRILLI: 16.

15                  MR. CARY: Yes.

16                  MR. CASTRILLI: Q. On page 16 there is a  
17 heading on the left-hand side of the page:  
18 Silvicultural Operations, and it says:

19                         "Classification of cut-over forest land  
20                         for year ended March 31, 1986..."

21                         And the area is in hectares. And if we  
22 look under the heading of Total Crown Land you see the  
23 total Crown land cut-over was 200,000 plus hectares; is  
24 that correct?

25                  MR. CARY: A. 200,199.

1 Q. Is that correct?

2 A. Yes.

3 Q. Your answer is yes?

4 A. Yes.

5 Q. And if we look at page 17, the same  
6 exhibit, under the heading: Summary of Silvicultural  
7 Operations, and under the sub-heading of Regeneration,  
8 Total Crown Land Regeneration, 111,392 for the Total  
9 Crown Land category?

10 A. That's correct.

11 Q. There are approximately 89,000  
12 hectares missing from the statistics; would you agree?

13 A. Well, I would like to clarify one  
14 thing. If you look at the heading on the top of page  
15 16, Classification of Cut-Over Forest Land for the year  
16 ended March 31st, 1986. If you look on page 17,  
17 Summary of Silvicultural Operation, Areas in Hectares  
18 in Year Ending March 31st, 1978.

19 There is no direct comparison between the  
20 cut-over and the treatment on these particular pages.

21 Q. I presume your testimony is you cut  
22 before you regenerate. So isn't there not supposed to  
23 be some parallel understanding of the relationship  
24 between pages 16 and 17?

25 A. We may be carrying out silvicultural

1 operations on cut-over that's five years old, four  
2 years old, three years old, two years old. It is a  
3 difficult comparison to do with this snapshot, that's  
4 all I am saying.

5 The cut-over is reported a year later.  
6 The companies report under the Crown Timber Act and  
7 that's a year later. We report our silvicultural  
8 efforts very much more currently. So all I am saying  
9 is that we may be treating cut-over that's not the '86  
10 cut-over, it may be '85, '84, '83.

11 Q. So is there any material before the  
12 Board that would permit the Board to determine for  
13 itself how much in year "x" which is cut is regenerated  
14 the following year? Is there any such evidence of that  
15 type before the Board?

16 A. No, there isn't.

17 Q. Thank you. Can you advise the Board  
18 generally what rotation is used for areas that  
19 regenerate naturally by working group, start with black  
20 spruce?

21 A. Could you repeat the question,  
22 please?

23 Q. Yes. What rotation is used by  
24 working group for areas that regenerate naturally?

25 A. As Dr. Osborn finished saying, we

1 cut, we harvest areas, and we are harvesting old forest  
2 at the moment and that old forest that has come about  
3 by natural regeneration may be 60 years old, may be  
4 140 years old. Spruce is usually cut at an older age  
5 than jack pine and poplar, for example.

6 Q. Sorry, than jack pine and...?

7 A. Poplar.

8 Q. What is the range for black spruce?

9 A. Dr. Osborn, I believe, would be  
10 better qualified to give you those ranges.

11 DR. OSBORN: A. In the MAD calculations  
12 at the moment black spruce rotation will typically  
13 range from 90-120. It will depend upon how they have  
14 subdivided the black spruce working group into forest  
15 units. But typically the range would run 90-120 years  
16 as a rotation in the calculation for MAD.

17 Q. And for jack pine?

18 A. I am thinking of the bottom number.  
19 I would guess 70, maybe 65, but something up to maybe  
20 80 or maybe 85. 65-85, something in that order. Jack  
21 pine typically run around 70, 75.

22 Q. And this is in relation to areas that  
23 regenerate naturally?

24 A. This is in relation to the old forest  
25 as used in the MAD calculations. That is not new

1 forest, Mr. Castrilli, that is old forest as is at this  
2 point in time, and that is what is used in the MAD  
3 calculations.

4 Again, one other caveat. As we explained  
5 in doing yield regulation, the rotation is also  
6 partially a function of the product we are trying to  
7 produce.

8 Q. I would like to refer you to page  
9 124, Mr. Cary. To deal with this matter I would like  
10 to introduce the next exhibit which was an  
11 interrogatory you responded to.

12 MR. CASTRILLI: I ask for this to be made  
13 the next exhibit.

14 THE CHAIRMAN: Exhibit 156.

15 ---EXHIBIT NO. 156: Interrogatory No. 7 posed by  
16 CELA.

17 MR. CASTRILLI: Q. Now, my first two  
18 questions under this interrogatory were the following:

19 "Was a draft policy or final document  
20 produced for possible implementation in  
21 1973 and, if so, please produce a copy  
22 and the drafts in the final."

23 And the second question was:

24 "Please provide a copy of the 1974  
25 Bulletin referred to in the last

1 paragraph on page 124."

2 Now, your answer under (a) was, to date  
3 you have been unable to find or locate the draft  
4 policy. I am sure it exists, we will provide you with  
5 a copy.

6 Have you now been able to find a copy of  
7 the draft policy?

8 MR. CARY: A. No, I have not.

9 Q. Your answer to the second question  
10 was:

11 "To date, unable to find or locate a copy  
12 of the Bulletin."

13 Have you now been able to find a copy of  
14 the Bulletin?

15 A. I have not.

16 Q. Now, at the bottom of page 124, Mr.  
17 Dixon notes that:

18 "After discussions and review..."

19 And then over on to page 125:

20 "...within the Ministry and by  
21 forest industry, a revised but weekend  
22 draft policy, proposed policy for  
23 controlling the size of clear cuts in  
24 northern forest regions of Ontario was  
25 published in 1976."

1 Now, we asked for what was available  
2 preceding the release of the 1976 document, and your  
3 answer found in Item (c) was:

4 "Personnel are no longer available who  
5 worked on this project with the Ministry.  
6 Retrieval and location of this  
7 information is probably impossible.  
8 However, we will attempt to respond  
9 further as soon as practicable."

10 And the OFIA response has been entered as  
11 Exhibit No. 75.

12 Have you been able to determine further  
13 what is now practicable?

14 A. I have made no progress in this  
15 regard.

16 Q. In reference to the OFIA response in  
17 Exhibit 75, as you are aware, Exhibit 75 is a response  
18 to the 1976 proposed policy and that policy is a weaker  
19 version of the other policy Dixon refers to.

20 Is it your testimony that the earlier  
21 policy document is simply not available and not  
22 retrievable?

23 A. I have not been able to find that  
24 document.

25 MR. CASTRILLI: Mr. Chairman, I find that

1 this particular area is of particular concern to my  
2 client; it is, in fact, at the root of a lot of their  
3 case and I find it unbelievable that these documents  
4 cannot be found, considering they are referred to in a  
5 1982 report.

6 I would ask that they be produced.

7 MR. FREIDIN: I take exception to the  
8 innuendo. These documents have been searched for, they  
9 are not available. As you can see, they are referred  
10 to as draft bulletins, draft policies.

11 THE CHAIRMAN: Mr. Castrilli, there is  
12 nothing before this Board to indicate whatsoever that  
13 the Ministry, the proponent, is refusing to produce any  
14 documentation which it has in its procession and, for  
15 whatever reason, refuses to produce it.

16 You asked for the documentation, they  
17 undertook to look for it and search for it and have  
18 indicated to you, at least to this point in time, that  
19 they have been unable to locate it.

20 The reasons for it being missing, I do  
21 not think are explained, but we are dealing with  
22 something that happened several years ago. The same  
23 personnel, according to the Ministry, are not any  
24 longer with the Ministry and there is very little I  
25 think that this Board can do towards ordering its

1 production if, in fact, it either is misplaced or it no  
2 longer exists.

3 Obviously some of this documentation  
4 probably got into the public domain, in the sense that  
5 there were other groups and, I would suggest, other  
6 people that were reviewing this documentation at the  
7 time, other than just the Ministry, and perhaps some  
8 representations might be made to some of these other  
9 sources to see if other people have a copy, other than  
10 just the Ministry. I do not know.

11 So what do you propose in the event that  
12 they come back and indicate that they just do not have  
13 this documentation in hand?

14 MR. CASTRILLI: Well, Mr. Chairman, first  
15 of all, is it Mr. Cary's testimony that the information  
16 is not retrievable? I don't understand.

17 What efforts have been made to locate the  
18 material?

19 THE CHAIRMAN: Well, Mr. Cary, can you  
20 tell the Board what efforts have been made?

21 MR. CARY: I have contacted the  
22 Management Planning Section of this Ministry which I  
23 believe should have had, or most likely to have this  
24 information. They have searched their files and have  
25 been unable to come up with these drafts or letters,

1 minutes and the like.

2 THE CHAIRMAN: Has anybody contacted Dr.  
3 Dixon?

4 MR. CARY: Mr. Dixon died in nineteen  
5 eighty -- early '84.

6 THE CHAIRMAN: Well, that might therefore  
7 be difficult, obviously.

8 MR. CARY: That is the -- I have made no  
9 other inquiries because I felt that if they existed  
10 they would be there.

11 THE CHAIRMAN: Can the Ministry or any of  
12 the panel members think of anywhere else that they  
13 might make inquiries as to where these documents might  
14 be located?

15 (No response)

16 THE CHAIRMAN: The response is negative,  
17 Mr. Castrilli.

18 DR. OSBORN: Mr. Chairman --

19 MR. FREIDIN: Just so I am aware, is  
20 there a specific document that he is referring to here?

21 MR. CASTRILLI: Well, in particular, the  
22 document -- Mr. Dixon's report refers to after --  
23 bottom of page 124 and top of page 125:

24 "After discussions and review within the  
25 Ministry and by forest industry a revised

1 but weakened draft policy..."

2 MR. FREIDIN: The one of June, 1976.

3 MR. CASTRILLI: That is the one we have,  
4 so there is obviously one before it.

5 There clearly exists a policy prior to  
6 the one I have and I am about to file and I would  
7 submit, Mr. Chairman, we are at long last getting into  
8 some matters of relevance in terms of matters that the  
9 Ministry of Natural Resources are seeking approvals for  
10 and I would have thought, this being a major area, that  
11 efforts would have been made with respect to it, in  
12 fact, to determine what is available.

13 I have been given one document. This  
14 document refers to at least one other document.

15 THE CHAIRMAN: Well, Mr. Castrilli, the  
16 Ministry has indicated they have made the efforts.  
17 Unfortunately, they have not been successful in their  
18 efforts. But certainly Mr. Cary has indicated that he  
19 has made efforts to locate this document or documents  
20 that you are referring to.

21 MR. CASTRILLI: Could I ask if Mr. Cary  
22 would circulate a memo within the Ministry of Natural  
23 Resources, if he hasn't done so already?

24 MR. CARY: I can continue to make efforts  
25 to locate this, Mr. Chairman, if you feel it

1 appropriate.

2 THE CHAIRMAN: Well, obviously, Mr. Cary,  
3 Mr. Castrilli feels that this is documentation which he  
4 is seeking is important to his client's case and,  
5 therefore, I think it is the Board's view that every  
6 effort should be made to try and locate them.

7 And if by circulating a memorandum to all  
8 of your senior management or even district staff or  
9 regional staff would be of assistance, I think at least  
10 that effort should be made.

11 MR. CARY: I can either do that or I can,  
12 again, use -- consult with people who might have  
13 involved again and be more specific and then write them  
14 a memorandum. Occasionally, if you right this big  
15 blanket -- I can do it either way.

16 THE CHAIRMAN: Why don't you do both?  
17 Would that be satisfactory, Mr. Castrilli?

18 MR. CASTRILLI: I will accept that, I  
19 guess.

20 Q. Now, Mr. Cary, I would like to ask  
21 you some questions about a document that you were able  
22 to provide, being the -- I presume it is the 1987  
23 Proposed Policy for Controlling the Size of Clearcuts  
24 in Northern Forest Regions of Ontario.

25 MR. CASTRILLI: I am asking this be made

1 the next exhibit.

2 THE CHAIRMAN: Exhibit 157.

3 ---EXHIBIT NO. 157: Document entitled: Proposed  
4 Policy for Controlling the Size of  
Clearcuts in Northern Forest  
5 Regions of Ontario.

6 THE CHAIRMAN: Mr. Cary, in this document  
7 it indicates that it is prepared by a Mr. Flowers and  
8 Mr. Robinson. Are either of those gentlemen still  
9 around?

10 MR. CARY: Both are retired and I believe  
11 that Mr. Robinson lives in Stayner, I think, and Mr.  
12 Flowers I believe -- I think it's Thunder Bay, but I am  
13 not sure. I think so, I think here.

14 THE CHAIRMAN: Would it be appropriate to  
15 contact either of these gentlemen to see if they know  
16 about the earlier policy.

17 MR. CARY: I will.

18 THE CHAIRMAN: Very well.

19 MR. CASTRILLI: Q. Mr. Cary, if I could  
20 begin by referring you to the forward of what is now  
21 Exhibit 157. The second paragraph notes that:

22 "The report has been reviewed by  
23 the technical committees of the various  
24 divisions of the Ministry of Natural  
25 Resources and has their support."

1 Can you see that paragraph?

2 MR. CARY: A. I do.

3 Q. Were you a member of any of those  
4 technical committees?

5 A. No, I was not.

6 MR. CASTRILLI: Mr. Chairman, I believe  
7 the copies that I distributed of the pages, don't have  
8 page numbers, so I would suggest that we identify them  
9 by making the first full page page 1 and work on from  
10 there of the proposed policy, Exhibit No. 157.

11 No, we would not number the forward.

12 THE CHAIRMAN: We would start with  
13 Proposed Policy heading at the top?

14 MR. CASTRILLI: Yes.

15 THE CHAIRMAN: Very well.

16 MR. CASTRILLI: Q. Mr. Cary, so are you  
17 clear on what I have suggested so that we can follow  
18 through the report?

19 MR. CARY: A. I am sorry, I was --

20 Q. I am suggesting that in order to  
21 easily go through this report, since it lacks page  
22 numbers, that I would suggest that we number the pages  
23 beginning with the page that has the heading Proposed  
24 Policy and call that page No. 1 and so on throughout  
25 the rest of the document.

1 A. How far are you going to take me?

2 Q. You can probably stop after a few  
3 pages, for the time being?

4 A. Okay.

5 Q. First paragraph on page 1. The third  
6 sentence notes that:

7 "Clearcutting as a commercial logging  
8 system has been in use in the province  
9 since the earliest days of logging, but  
10 its main objective is to remove the  
11 marketable trees as economically as  
12 possible, not to promote regeneration and  
13 other forest values."

14 Do you see that paragraph, that part of  
15 the paragraph?

16 A. I do.

17 Q. Do you agree with that statement?

18 A. I don't agree with that statement  
19 fully no.

20 Q. Which parts of it do you agree with?

21 A. The clearcutting system, which you  
22 will be hearing much more of later, is an appropriate  
23 and sensible system, cutting harvest system for the  
24 boreal forest. What I think Mr. Flowers is talking  
25 about here is size.

1 We have clear cut and will continue to  
2 clear cut.

3 "Its main objective is to remove the  
4 marketable trees as economically as  
5 possible...."

6 Well, that is one objective, but we have  
7 to clear cut in order to attain regeneration.

8 Q. So you fundamentally -- sorry.

9 A. So clear cutting does promote  
10 regeneration. I don't necessarily agree with that  
11 rather narrow statement.

12 Q. I see. So, in particular, you  
13 disagree with the last part of that sentence, that  
14 clear cutting does not promote regeneration and other  
15 forest values?

16 A. I don't know what Mr. flowers meant  
17 by that or Mr. Robinson, the authors.

18 Q. I see. Let's go on to the second  
19 paragraph. The paragraph reads:

20 "The general logging practice has been to  
21 remove all merchantable timber as it is  
22 made accessible by developing road  
23 system. After a few years the clear cut  
24 pattern is often only broken by road and  
25 shoreline reserves and by timber bypass

1 because of unmerchantability. The rapid  
2 increase in the size of modern forest  
3 industries and the trend to complete  
4 Mechanization and the utilization of all  
5 species has resulted in contiguous clear  
6 cut areas in northern Ontario ranging in  
7 extreme cases up to 50,000 acres. This  
8 is not an acceptable application of the  
9 silvicultural system."

10 Do you agree with that paragraph?

11 A. I am unable to verify the authors'  
12 comments about 50,000 acres. Remember, this was 1974  
13 and --

14 Q. It says 1976?

15 A. '76. I don't believe we were  
16 utilizing all species then and I have never seen a  
17 contiguous clear cut of 50,000 acres. They were  
18 professional foresters of the day and those are the  
19 observations they made.

20 Q. Just because we are into the age of  
21 metric, what would 50,000 acres be in hectares,  
22 approximately? 20 thousand?

23 A. Yes.

24 Q. Thank you. The third paragraph on  
25 the page:

1 "Evidence is mounting that excessively  
2 large clear cuts do not regenerate as  
3 as well as more protected smaller cuts.  
4 Large clear cuts are also more subject to  
5 site alteration due to exposure, the  
6 large clear cuts drastically alter  
7 wildlife habitat and create aesthetically  
8 objectionable landscapes."

9 Do you agree with that paragraph?

10 A. I would have to examine the evidence.

11 I am not quite sure what evidence they used to make  
12 that first statement. Mr. Armson, I believe that you  
13 were involved in some discussions with the authors  
14 about the hard evidence.

15 MR. ARMSON: A. Yes, I was. During the  
16 year that I was undertaking the study on forest  
17 management, 1975-1976, Mr. Robinson - and I can't  
18 recall whether it was the middle of winter of 75-76 or  
19 in the very early spring, but I think it was in the  
20 early spring, and I remember this very distinctly -  
21 gave me a copy of this Proposed Policy Document and  
22 asked me for my professional judgment on it.

23 I took it away with me and I can be very  
24 clear, I read it over the weekend and I handed it back  
25 to Mr. Robinson on Monday and he said: What did I

1 think of it, and I said: I had a very low opinion of  
2 it, and that the rationale and the statements,  
3 particularly the table concerning constraints in this  
4 document wouldn't hold water under any scientific or  
5 full professional examination.

6 Q. Sorry, what was the year of that  
7 discussion?

8 A. As I say, it could have been  
9 December, 1975 or certainly in '76. It was during the  
10 period and the latter part of the period that I was  
11 conducting the study for the Ministry.

12 Q. So your discussion took place before  
13 the Proposed Policy was published in June, 1976?

14 A. I presume that, but it may have been  
15 February, '76. I don't know. Certainly the table that  
16 I see in the document before me is exactly the table  
17 that I had, I can remember the major points in it very  
18 clearly.

19 THE CHAIRMAN: You are referring to what,  
20 Table 1?

21 MR. ARMSON: Yes, Mr. Chairman, that  
22 would be Table 1 and certainly much of the text I  
23 recall my sense of it.

24 MR. CASTRILLI: Q. Now, on page 2, there  
25 is a reference generally to the Proposed Policy which

1 outlines the constraints you have just referred to, and  
2 we will come back to that in a moment.

3 Move on to page 3, or what would be page  
4 3, the last part of the paragraph on that page. The  
5 authors are there referring to that part of the  
6 revision objective which is referred to above, which I  
7 understand appears as it does in the current Timber  
8 Management Planning Manual and they note that the  
9 objective, or that part of it that refers to continuous  
10 contribution requires that forest productivity be  
11 maintained.

12 They go on to say that:

13 "To do this, it is essential that the  
14 harvested areas be regenerated  
15 immediately. The size of clear cuts can  
16 greatly influence the..."

17 Over onto page 4:

18 "...the success of regeneration and  
19 subsequent tree growth. Some species  
20 need more protection than others, but all  
21 require that the effects of exposure be  
22 minimized."

23 Do you agree that the size of clear cuts  
24 can greatly influence the success of regeneration and  
25 subsequent tree growth, Mr. Cary?

1 MR. CARY: A. Are you talking about  
2 natural regeneration here, Mr. Castrilli?

3 Q. Well, the paragraph doesn't seem to  
4 make a distinction between the two. If you have a  
5 different answer vis-a-vis artificial regeneration or  
6 natural regeneration, why don't you give both?

7 A. I don't agree with that statement per  
8 se. On the other hand, it has been my professional  
9 observation that natural regeneration in clear cuts may  
10 be temporarily affected by exposure, but it is my  
11 experience that those effects, whether they be called  
12 air drainage, frost pockets are temporary and that  
13 clear cuts regenerate naturally and when we treat them  
14 with an artificial regeneration treatment, planting or  
15 seeding, they regenerate.

16 Q. So your testimony is clear cuts can  
17 affect natural regeneration for a while, but clear cuts  
18 do not affect artificial regeneration; is that correct?

19 A. I am saying, yes, there may be an  
20 influence on natural regeneration for a short period of  
21 time.

22 Q. But not on artificial regeneration?

23 A. There could be. Again, on a whole --  
24 depending on a whole variety of factors, some temporary  
25 effect.

1 Q. The next paragraph on that page, that  
2 part of the objective:

3 "Consistent with sound environmental  
4 practices and to provide for other uses  
5 of the forest requires that forest sites  
6 and wildlife habitat be protected. Sites  
7 have been removed from a productive state  
8 or, at the very least, had their  
9 productivity impaired due to excessive  
10 exposure in large clear cuts. Large  
11 cleared areas become barriers to the  
12 movement of some forms of wildlife and  
13 are temporarily unsuitable to many  
14 forms of wildlife."

15 Do you agree with that paragraph?

16 A. I don't agree with the statement that  
17 sites have been removed from a productive state and I  
18 don't believe that they have had their productivity --  
19 site productivity impaired due to excessive exposure in  
20 large clear cuts.

21 I would agree that wildlife patterns may  
22 be influenced by fires, windthrow, clear cuts. I think  
23 you will be hearing much more about that in later  
24 panels.

25 Q. Page 5, the first full paragraph on

1 the page indicates that:

2 "Reducing the size of clear cuts may,  
3 for a number of reasons, result in  
4 increased costs to an industry which must  
5 compete in world markets. It is thus  
6 important that guidelines for  
7 implementation be realistic and allow for  
8 the constraints to be phased in over a  
9 period of years and the economic impact  
10 on industry minimized.."

11 And the paragraph goes on to read:

12 "Conversely, however, the government  
13 cannot continue to permit uncontrolled  
14 clear cutting."

15 Do you agree with the last sentence in  
16 that paragraph?

17 A. Mr. Flowers and Mr. Robinson maintain  
18 that uncontrolled clear cutting was taking place then.  
19 I would suggest that if that was the case it is now  
20 changed completely, the government took action.

21 Q. What was the form of that action?

22 A. Silvicultural ground -- guidelines,  
23 silvicultural ground rules, guidelines for tourism,  
24 moose, fish, a multitude of actions that have come into  
25 play in the late 70s and early 80s.

1 Q. Sorry.

2 A. Silvicultural prescriptions, much  
3 more exact.

4 Q. Is the Ministry of Natural Resources  
5 seeking approval from this Board for guidelines, moose  
6 habit, tourism habitat, et cetera?

7 A. I believe those guidelines have been  
8 approved by the Minister of Natural Resources.

9 Q. I asked you if the subject matter is  
10 subject to approval from this Board.

11 MR. FREIDIN: No.

12 MR. CASTRILLI: Thank you.

13 Q. I would like to briefly refer you to  
14 Appendix 2 of Exhibit 157. Appendix 2 clearly begins  
15 at page 9. I would like to refer you to Item No. 8 of  
16 Appendix No. 2 which appears at page 11 and the heading  
17 is called: Ontario Ministry of Natural Resources --  
18 excuse me -- Unpublished Survey Reports.

19 Do you see that page?

20 MR. CARY: A. Yes, I have it.

21 Q. And that item. And the authors note  
22 that:

23 "numerous Ontario Ministry of Natural  
24 Resources Regeneration Surveys show the  
25 lack of suitable regeneration following

1 clear cutting and that patterns of  
2 regeneration appear to be influenced by  
3 the size of the clear cut."

4 Do you agree with that statement that  
5 uncontrolled clear cutting has an adverse impact on  
6 regeneration success?

7 A. And, again, I am unfamiliar with the  
8 surveys, I don't know what they looked at. They made  
9 their conclusion based on their examination of those  
10 surveys.

11 Q. Has the Ministry of Natural Resources  
12 filed those surveys with the Board?

13 A. No, it has not.

14 Q. Let me guess, if I asked for the  
15 surveys would they be retrievable?

16 A. I have no idea whether they would be  
17 retrievable or not. I don't know what Mr. Flowers and  
18 Mr. Robinson -- are they referring to regional surveys,  
19 provincial surveys, local surveys, management unit  
20 surveys, I have no idea.

21 I wouldn't know where they were taken or  
22 how they were conducted.

23 THE CHAIRMAN: I take it none of this  
24 document is referenced anywhere in the report; is that  
25 correct?

1 MR. CASTRILLI: None of the...?

2 THE CHAIRMAN: This documentation,  
3 background documentation is referred to by way of  
4 footnote or something in the report, so you can narrow  
5 it down to a title and a name and -- a title name or  
6 date or something that would assist.

7 MR. CASTRILLI: It would appear from Item  
8 8 that there is no footnoting. Some of the other  
9 documents are simply a single document and they speak  
10 for themselves.

11 Q. Mr. Cary, can you confirm this for  
12 me: That what they appear to be saying at that page is  
13 that the larger the clear cut the less successful or  
14 suitable the regeneration?

15 MR. CARY: A. That is what the statement  
16 appears to say.

17 Q. And I am just looking at Appendix 4,  
18 page 22, a series of photographs running from - it  
19 would be page 23 right to the end of the document - a  
20 total of actually 33 of them.

21 And the authors simply note:

22 "The following pages illustrate the  
23 reasons why this policy has been  
24 developed. The pictures show some of the  
25 results of the present uncontrolled clear

1 cutting practices and attempt to  
2 emphasize the needs for the constraints  
3 imposed."

4 Would you agree that the photos reveal  
5 that uncontrolled clear cutting is a problem for, for  
6 example, regeneration success?

7 A. Looking at this photography in black  
8 and white it is very difficult to come to that  
9 conclusion without looking at the photographs.

10 I would also suggest that these are  
11 snapshots in time and that the situation now on these  
12 clear cuts, wherever they are, would be very much  
13 changed. I also suggest that these areas that are  
14 shown on these clear cuts would now be free to grow.

15 I cannot make --

16 Q. What would they be free to grow with,  
17 or as?

18 A. Well, they would be poplar.

19 Q. Spruce or poplar?

20 A. Conifer species or softwood species.

21 Q. Mr. Armson, on June 16th of this year  
22 in Volume 16, I was questioning you on the issue of  
23 whether by 1975 it was evident that industry cutting  
24 practices were causing problems for the success of  
25 MNR's regeneration efforts.

1 Do you recall those questions?

2 MR. ARMSON: A. I do.

3 Q. And you recall that your answer was  
4 that regeneration problems were not due to uncontrolled  
5 clear cutting, but to other factors such as lack of  
6 roads?

7 A. That was part -- I believe that was  
8 one of the reasons.

9 Q. In light of the report on clear  
10 cutting which is now Exhibit 157, do you wish to change  
11 your earlier answer?

12 A. No, I am even more confirmed in it.

13 Q. Now, before I return to the report's  
14 proposals I would like to introduce another document  
15 bearing on this issue. (handed)

16 Mr. Cary, I am showing you a document  
17 entitled -- the first page is: Papers Prepared for  
18 Panel Discussion at the Canadian Institute of Forestry/  
19 Ontario Professional Foresters Association, Annual  
20 Meeting at Lakehead University, Thunder Bay, August 23,  
21 1976.

22 The second page indicates a paper  
23 prepared by you and Ministry of Natural Resources for  
24 Dryden, Ontario. The title of the paper is: How Does  
25 Today's Forest Manager Meet the Projected Demands On

1 His Forest Through Growing Trees Now.

2 Is this your document, Mr. Cary?

3 MR. CARY: A. Yes, it is.

4 THE CHAIRMAN: Exhibit 158.

5 ---EXHIBIT NO. 158: Document entitled: Papers  
6 Prepared for Panel Discussion at  
7 the Canadian Institute of  
8 Forestry/Ontario Professional  
9 Foresters Association Annual  
Meeting at Lakehead University,  
Thunder Bay, Ontario, dated  
August 23, 1976.

10 MR. FREIDIN: Do panel members have a  
11 copy of that document?

12 MR. GORDON: I can share with Dr. Osborn.

13 MR. FREIDIN: Do you have an extra one?

14 MR. CASTRILLI: (handed)

15 Q. Mr. Cary, this is a document that is  
16 actually referred to in your evidence at page 3; is  
17 that correct?

18 MR. CARY: A. That's correct.

19 Q. Now, Mr. Armson, I would like to  
20 refer you to page 2.

21 MR. ARMSON: A. Yes, I have page 2.  
22 That is the page titled Abstract?

23 Q. That's correct. The third paragraph  
24 on the page states the following:

25 "The failed and unsatisfactorily

1 regenerated portions of the cut-over that  
2 do not meet the production standards are  
3 rapidly increasing. The causes of this  
4 alarming situation are a serious lack of  
5 manpower and uncontrolled cutting. The  
6 ensuing effect is a physical inability to  
7 mechanically site prepare a major portion  
8 of the cut-over and limited artificial  
9 regeneration effect on the balance."  
10 Do you agree with that paragraph, Mr.

11 Armson?

12 A. I would suggest that in the light of  
13 the time and the situation, the statement probably  
14 reflected the author's opinion and I have no immediate  
15 objection to it.

16 Q. I refer you to the bottom of page 4,  
17 Mr. Armson.

18 MR. CASTRILLI: Mr. Chairman, perhaps we  
19 could wait until the train goes by.

20 Q. The bottom of page 5, Mr. Armson, the  
21 last full paragraph -- sorry, it's on page 4.

22 MR. ARMSON: A. Is that beginning line  
23 19: "The company management unit..."?

24 Q. Yes, that's correct. The paragraph  
25 reads:

1 "The Company Management Unit in Dryden,  
2 Ontario..."

3 That Mr. Cary worked on  
4 at the time:

5 "...has some 965,000 productive forest  
6 acres. Its regeneration objective by the  
7 year 2020 is 6,900 acres of the annual  
8 cut of approximately 13,000 acres or  
9 nearly 55 per cent of the cut-over."

10 That is the objective. Table 1  
11 illustrates what has happened since the start of the  
12 management period and the inception of the Production  
13 Policy and we may get to the table later on.

14 The next paragraph:

15 "Approximately 25 per cent of the cut is  
16 now being treated."

17 And I presume that is Mr. Cary's  
18 assessment of Table 1. Is that right, Mr. Cary? If  
19 you look at the numbers on page 8 of what is now  
20 Exhibit 158?

21 MR. CARY: A. That is correct.

22 Q. Now, moving on in the paragraph,  
23 going over to page 5, Mr. Armson, the last sentence  
24 notes that Mr. Cary:

25 "...will now attempt to outline the

1 reasons for this apparent proportional  
2 shrinkage in regenerated acres as the cut  
3 enlarges."

4 The next paragraph:

5 "The premise, no cutting without  
6 silvicultural prescription is neither  
7 startling or revolutionary. However, for  
8 want of better terms, uncontrolled clear  
9 cutting in boreal softwoods and partial  
10 cut high grade practices in the boreal  
11 mixed wood stands occur not only in  
12 Dryden, but across northern Ontario.  
13 Both these methods of cutting are not  
14 part of any forest management system to  
15 my knowledge. From experience and  
16 conversations with foresters in the  
17 boreal region, my situation is  
18 unfortunately far from unique."

19 Stopping there, Mr. Armson, do you agree  
20 with that?

21 MR. ARMSON: A. Well, I agree that that  
22 is what the author stated, and I believe it would agree  
23 with my observation that, at that time, industry was  
24 not involved in silvicultural prescriptions nor in  
25 regeneration treatments, except as under simple

1 contract.

2 Q. And do you agree with me that what I  
3 just read into the record indicates that uncontrolled  
4 clear cutting by industry in the mid-1970s was a clear  
5 contributor to failed and unsatisfactory regeneration  
6 and it was clearly seen as such by Mr. Cary?

7 A. I cannot accept that uncontrolled  
8 clear cutting, per se, may result in lack of  
9 regeneration.

10 Q. So you disagree with Mr. Cary?

11 A. I would have to say that he expressed  
12 his opinion in 1976 and, in 1988, I would say that that  
13 statement can be challenged.

14 Q. And I gather you challenge Mr. Cary's  
15 assessment?

16 A. Yes.

17 MR. CASSIDY: Mr. Chairman, this would be  
18 an appropriate place to break for the day.

19 THE CHAIRMAN: Well, let's just ask one  
20 more question, then we will break.

21 Mr. Cary, does your opinion remain the  
22 same in 1988 as it did in 1976 when you wrote these  
23 words?

24 MR. CARY: Mr. Jeffery, I have had the  
25 opportunity to revisit the areas which I surveyed and

1 the company management unit on which I used to work  
2 and my opinion has entirely changed.

3 The situation I find myself - and I went  
4 back in May of this year - and what is now the Canadian  
5 Forest Products Limited area south and north of Dryden,  
6 my predictions about what would happen as a result of  
7 my remarks in this paper simply have not transpired.

8 The situation is startlingly different.  
9 My predictions were dead wrong.

10 The areas that were not treated now  
11 contain 20-year-old jack pine and spruce and hardwood  
12 stands which are free to grow, they are in the FRI.  
13 Whether they were -- whether they came back through  
14 natural regeneration or they were untreated. As  
15 further evidence, not only visually, because I flew  
16 around this area together with staff from the  
17 Ministry -- the local Ministry office and the industry,  
18 the 1982 Forest Resource Inventory, coupled with the  
19 not satisfactorily regenerated survey that was  
20 conducted on that management unit - because this  
21 management unit is to be an FMA - and also ground  
22 surveys conducted by the foresters, the industry  
23 foresters on that area tell a very different story m.  
24 The stocking levels are very high, the gloomy  
25 predictions I made then have simply not happened.

1                   The intensity of treatment has changed  
2 measurably. What I was looking at was a very difficult  
3 to treat cut-over because I lacked mechanical  
4 site-preparation equipment, there were far too many  
5 residual poplar and birch to enable me, with that  
6 rather limited range of site-preparation equipment, to  
7 treat the area. We had very little planting stock  
8 available. Our prescriptions were clumsy.

9                   Now, it has all changed. They are  
10 starting to utilize poplar on that unit. The  
11 availability of planting stock has doubled. They have  
12 all sorts of site-preparation equipment to treat a  
13 variety of sites.

14                   So those remarks were made, I have to  
15 say, in the flush of youth and they were very  
16 premature. I had -- those predictions turned out to be  
17 dead wrong.

18                   MR. CASTRILLI: Q. Mr. Cary, is there  
19 anything before the Board to verify the current or the  
20 assessment you just gave with respect to the changes on  
21 the Dryden unit?

22                   MR. CARY: A. I could obtain that, Mr.  
23 Castrilli, if you wished.

24                   Q. Yes.

25                   MR. FREIDIN: The changes you are

1 referring to are what this area looks like now?

2 MR. CASTRILLI: The changes he says are  
3 different from what he outlined in Exhibit 158.

4 MR. FREIDIN: That is a condition of -- I  
5 understand that to be to provide some further evidence  
6 of the conditions of the site. And if that is what my  
7 friend is seeking and I understand it correctly, we can  
8 provide that information.

9 THE CHAIRMAN: Perhaps you can do that in  
10 re-examination.

11 MR. FREIDIN: We will try.

12 THE CHAIRMAN: If it can be done that  
13 early.

14 MR. CASTRILLI: Mr. Chairman, this would  
15 be a convenient place to break for the day.

16 THE CHAIRMAN: Very well. The Board will  
17 adjourn now until 9:30 tomorrow morning.

18 Thank you.

19 ---Whereupon the hearing adjourned at 5:50 p.m., to be  
20 reconvened on Tuesday, August 16th, 1988, commencing  
at 9:30 a.m.

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